1982

MONTANA APPRAISAL MANUAL

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State of Montana
Department of Revenue
Property Assessment Division
Residential Commercial Bureau

Page	Release	Page	Release
105.3	03-84	110.3	03-84
105.4	03-84	110.4	03-84
Figure 4	03-84	Identification Data	05-23-84
105.5	03-84	201.1	03-84
105.6	03-84	201.2	03-84
105.7	03-84	201.3	03-84
105.8	03-84	Municipality Form	03-84
105.9	03-84	201.4	03-84
105.10	03-84	201.5	05-23-84
105.11	03-84	201.6	03-84
105.12	03-84	202.1	03-84
106.1	03-84	Subdivision Form	09-80
106.2	03-84	202.2	03-84
Figure 3	03-84	202.3	03-84
106.3	03-84	202.4	03-84
106.4	03-84	202.5	03-84
106.5	03-84	203.1	03-84
106.6	03-84	204.1	03-84
107.1	03-84	205.1	03-84
107.2	03-84	205.2	03-84
107.3	03-84	206.1	03-84
107.4	03-84	207.1	03-84
108.1	03-84	207.2	03-84
108.2	03-84	208.1	03-84
109.1	03-84	209.1	03-84
109.2	03-84	209.2	03-84
110.1	03-84	210.1	03-84
110.2	03-84	211.1	03-84

Page	Release	Page	Release
212.1	03-84	304.1	03-84
213.1	03-84	304.2	03-84
213.2	03-84	305.1	03-84
214.1	03-84	305.2	03-84
214.2	03-84	306.1	03-84
215.1	03-84	306.2	03-84
216.1	03-84	307.1	03-84
217.1	03-84	307.2	03-84
218.1	03-84	308.1	03-84
219.1	03-84	308.2	03-84
220.1	03-84	309.1	03-84
220.2	03-84	309.2	03-84
221.1	03-84	310.1	03-84
Land Data Section	05-23-84	310.2	03-84
301.1	03-84	311.1	03-84
301.2	03-84	311.2	03-84
301.3	03-84	312.1	03-84
302.1	03-84	312.2	03-84
302.2	03-84	313.1	03-84
302.3	03-84	314.1	03-84
302.4	03-84	315.1	03-84
302.5	03-84	315.2	03-84
302.6	03-84	316.1	03-84
302.7	03-84	316.2	03-84
302.8	03-84	317.1	03-84
302.9	03-84	317.2	03-84
303.1	03-84	318.1	03-84
303.2	03-84	318.2	03-84

Page	Release	Page	Release
Total Property Data	05-23-84	509.1	03-84
401.1	03-84	510.1	05-23-84
401.2	03-84	511.1	03-84
402.1	03-84	511.2	03-84
402.2	03-84	511.3	03-84
402.3	03-84	512.1	03-84
403.1	03-84	512.2	03-84
403.2	03-84	512.3	03-84
Building Data Section	05-23-84	512.4	03-84
501.1	03-84	513.1	03-84
501.2	05-23-84	514.1	03-84
501.3	03-84	515.1	03-84
502.1	03-84	515.2	03-84
503.1	03-84	516.1	05-23-84
504.1	03-84	516.2	05-23-84
504.2	03-84	517.1	03-84
505.1	03-84	518.1	03-84
505.2	03-84	519.1	03-84
505.3	03-84	520.1	03-84
506.1	03-84	520.2	03-84
506.2	03-84	521.1	03-84
507.1	03-84	522.1	03-84
507.2	03-84	522.2	03-84
507.3	03-84	523.1	03-84
507.4	03-84	524.1	03-84
508.1	03-84	524.2	03-84
508.2	05-23-84	525.1	03-84
508.3	03-84	525.2	03-84

Page	Release	Page	Release
525.3	03-84	547.1	03-84
526.1	03-84	548.1	03-84
527.1	03-84	549.1	03-84
528.1	03-84	549.2	03-84
529.1	03-84	550.1	03-84
530.1	03-84	550.2	03-84
531.1	03-84	551.1	03-84
532.1	03-84	551.2	03-84
533.1	03-84	551.3	03-84
534.1	03-84	552.1	03-84
534.2	03-84	552.2	03-84
534.3	03-84	553.1	05-23-84
534.4	03-84	554.1	03-84
535.1	03-84	555.1	03-84
536.1	03-84	556.1	03-84
537.1	03-84	557.1	03-84
538.1	03-84	558.1	03-84
539.1	03-84	559.1	03-84
540.1	03-84	560.1	03-84
540.2	03-84	560.2	03-84
541.1	03-84	Accessory Building	05-23-84
542.1	03-84	601.1	03-84
543.1	03-84	601.2	03-84
543.2	03-84	602.1	03-84
544.1	03-84	602.2	03-84
544.2	03-84	602.3	03-84
545.1	03-84	603.1	03-84
546.1	03-84	603.2	03-84

Page	Release	Page	Release
604.1	03-84	Staff Data Section	05-23-84
604.2	03-84	701.1	03-84
605.1	03-84	702.1	03-84
605.2	03-84	702.2	03-84
606.1	03-84	703.1	03-84
607.1	03-84	703.2	03-84
607.2	03-84	704.1	05-23-84
608.1	03-84	705.1	03-84
608.2	03-84	706.1	03-84
609.1	03-84	707.1	03-84
609.2	05-23-84	708.1	03-84
609.3	03-84	708.2	03-84
610.1	03-84	709.1	03-84
610.2	03-84	709.2	03-84
611.1	03-84	710.1	03-84
611.2	03-84	710.2	03-84
612.1	03-84	710.3	05-23-84
612.2	03-84	710.4	03-84
613.1	03-84	711.1	03-84
613.2	03-84	711.2	03-84
614.1	03-84	712.1	03-84
614.2	03-84	712.2	03-84
615.1	03-84	712.3	03-84
616.1	03-84	713.1	03-84
617.1	03-84	713.2	03-84
618.1	05-23-84	714.1	03-84
619.1	05-23-84	715.1	03-84
		715.2	03-84

Page	Release
715.3	03-84
716.1	03-84
716.2	03-84
717.1	03-84
717.2	03-84
718.1	03-84
718.2	03-84
719.1	03-84
719.2	03-84
Residential Specifications and Pricing Ladders	
IF1	03-84
Schedule	03-84
IF2	03-84
Schedule	03-84
IF3	03-84
Schedule	03-84
IF4	03-84
Schedule	03-84
IF5	03-84
Schedule	03-84
IF6	03-84
Schedule	05-23-84
IF7	03-84
Schedule	05-23-84
IF8	03-84
Schedule	05-23-84

Guide for Mobile Home Classification

Page	Release
PP-1	03-84
PP-2	03-84
PP-3	03-84
PP-4	03-84
PP-5	03-84
PP-6	03-84
PP-7	03-84
PP-8	03-84
PP-9	03-84
PP-10	03-84
PP-11	03-84

Title	Condition	Release
Mobile Home Class Specifications	Low Cost	03-84
Mobile Home Schedule	Low Cost	03-84
Mobile Home Addition Specification	Low Cost	03-84
Mobile Home Class Specifications	Average	03-84
Mobile Home Schedule	Average	03-84
Mobile Home Addition Specification	Average	03-84
Mobile Home Class Specifications	Good	05-23-84
Mobile Home Schedule	Good	03-84
Mobile Home Addition Specification	Good	03-84
Mobile Home Class Specifications	Excellent	03-84
Mobile Home Schedule	Excellent	03-84
Mobile Home Addition Specification	Excellent	03-84

Mobile Home Depreciation Table 03-84

Farm Building Appraisal Manual
Table of Contents 03-84

Page	Release	Page	Release
PP 1	03-84	PP 18	03-84
PP 2	03-84	PP 19	03-84
PP 3	03-84	PP 20	05-23-84
PP 4	03-84	PP 21	03-84
PP 5	03-84	PP 22	03-84
PP 6	03-84	PP 23	03-84
PP 7	03-84	PP 24	03-84
PP 8	03-84	PP 25	05-23-84
PP 9	05-23-84	PP 26	05-23-84
PP 10	03-84	PP 27	03-84
PP 11	03-84	PP 28	03-84
PP 12	03-84	PP 29	03-84
PP 13	03-84	PP 30	03-84
PP 14	03-84	PP 31	03-84
PP 15	03-84	PP 32	03-84
PP 16	03-84	PP 33	03-84
PP 17	03-84		

Lot Value Computations

PP 1	03-84	PP 5	03-84
PP 2	03-84	PP 6	03-84
PP 3	03-84	PP 7	03-84
PP 4	05-23-84	PP 8	03-84

Page	Release	Page	Release
PP 1	03-84	PP 14	03-84
PP 2	03-84	PP 15	03-84
PP 3	03-84	PP 16	03-84
PP 4	03-84	PP 17	03-84
PP 5	03-84	PP 18	03-84
PP 6	03-84	PP 19	03-84
PP 7	03-84	PP 20	03-84
PP 8	03-84	PP 21	03-84
PP 9	03-84	PP 22	03-84
PP 10	03-84	PP 23	03-84
PP 11	03-84	PP 24	03-84
PP 12	03-84	PP 25	03-84
PP 13	03-84		

TABLE OF CONTENTS

I - INTRODUCTION

II - APPRAISAL PLAN

III - DATA COLLECTION SECTION

IV - RESIDENTIAL SPECIFICATIONS AND PRICING LADDERS

V - MOBILE HOME SECTION

VI - FARM IMPROVEMENTS SECTION

VII - 1972 COST COMPUTATION MANUAL

INTRO TO DATA COLLECTION

The Computer Assisted Appraisal Manual contains a great deal of technical information. In order to become familiar with this manual and ultimately use it most efficiently, it is suggested that you read the total manual once. When you have reviewed the manual and are familiar with its contents you should be able to use the manual as it was designed, a reference manual.

We have included some "Computer Assisted Appraisal Problem Report Forms" for your use. If, as you use this manual, you find any typographical errors in the text, technical errors in the specifications, or feel an additional section would be helpful please let us know. A Problem Report Form should be completed, including your suggested solution to the problem. Problems that have been reported will be reviewed by Residential Commercial Bureau staff. If a correction is made to the manual both the correction pages and an updated indicies will be provided for each manual in the field.

General questions about the Computer Assisted Appraisal Manual should be addressed to your Area Manager. By addressing your questions to the Area Manager first, you will assist in helping all counties in your area correct potential problems. If your Area Manager cannot answer your question, then they may instruct you to call the Helena office or they may pursue the problem themselves.

Good Luck!

COMPUTER ASSISTED APPRAISAL

PROBLEM REPORT FORM

Batch # _____

County # _____

Individual Reporting Problem _____

Date _____ Phone Number _____

Area of System Where Problem Occured:

__ 1) Entry __ 3) Worksheets __ 5) Cost Comp '82' __ 7) Manual

__ 2) Edit __ 4) Cost Comp '72' __ 6) Parcel Total __ 8) Other

Specify if Other _____

Specific Description of Problem. (Use extra pages if necessary)

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NOTE: Attach photocopies of problems - at a minimum Entry Edit Worksheets,Cost '72' or '82' or Parcel Total.

Attach Suggestions for solving the problem i.e. changes in values, changes in manual text, etc.

Mail to: Scott Buswell
Department of Revenue
Property Assessment Division
Residential Commercial Bureau
Sam W. Mitchell Building
Helena, MT 59620

SB/jhD

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PROPERTY ASSESSMENT DIVISION

APPRAISAL PLAN

DECEMBER 31, 1981

Background

In September of 1981 and again in November of 1981, the Department of Revenue presented draft appraisal plans to the Revenue Oversight Committee. As a result of the presentation of the plans and the discussion of various options for implementing the plans, the Revenue Oversight Committee endorsed the Department's recommendations for completing the appraisal of residential, commercial, agricultural, timber and industrial property during the current cycle.

The Appraisal plan that follows will consist of three parts: residential and commercial appraisal, agricultural and timber appraisal and industrial appraisal.

In general, the appraisal plan of the Property Assessment Division will consist of valuing the above types of property using manuals and procedures in effect prior to the 47th Legislature. The approach of the Department will be to appraise properties during the remainder of the current cycle, through tax year 1985, using existing methods and manuals. Additionally, during this cycle the Department will review and correct outdated appraisals, place new construction on the property tax rolls and value properties reappraised with the value date of January 1, 1982. The new values will not be put on the tax rolls until 1986. In the case of agricultural and timber land, new values will be established based on data collected during the time period beginning January 1, 1977 and ending January 1, 1982. The method of determing the grade of the land will not be changed. The new values for agricultural and timber property will not be put on the tax rolls until 1986.

RESIDENTIAL AND COMMERCIAL APPRAISAL PLAN

The goal for the appraisal cycle will be to complete ten residential appraisals per day per appraiser assigned residential responsibilities. The goal for commercial appraisals during this cycle will be to complete two commercial appraisals per day per appraiser assigned commercial responsibilties. In order to achieve these appraisal goals, the department's procedures have been modified somewhat for the remainder of the cycle. A summary of those modifications is presented below.

All residential property not currently listed on a residential-commercial appraisal form (RDCF-2) will be listed on the (RDCF-3). Residential property recorded on forms other than these will be transferred to the RDCF-3 form prior to the end of the cycle.

For commerical property, the AB-22 form will be used through the remainder of the cycle.

For agricultural improvements, the form AB-21 will be used through the remainder of the cycle.

Daily work progress reports will be completed and submitted monthly for every county. Those work progress reports will assess plan performance against actual accomplishments and identify those factors that directly affect the appraisal performance in any given month.

For residential new construction, the 1972 Montana Appraisal Manual will be

used through tax year 1985; for reappraisal the Montana Appraisal Manual developed from January 1, 1982 Marshall Valuation Service data will be used. The 1982 values will go on the assessment lists beginning tax year 1986.

For commercial new construction, the July 1976 Marshall Valuation Service will be used through tax year 1985; for reappraisal the January 1, 1982 Marshall Valuation Service Manual will be used unless the property is not listed in this manual. In that case other construction cost manuals such as Boeckh or Means will be used with a publication date as close to Marshall Valuation Service as possible.

On reappraisal for both residential and commercial property, the January 1, 1982 values will go on the tax rolls for tax year 1986. When those changes in valuation are made, all property owners will receive a notice of change in appraisal valuation. These notices will be prepared for mailing in early 1986 to allow the property owners sufficient time to discuss their appraisals prior to taxes being calculated for tax year 1986.

Residential and commercial appraisers will be required to be certified in accordance with Attachment A of this plan.

Improvements constructed prior to 1978 should be reappraised according to previously stated guidelines. Where the appraiser is satisfied with existing building measurements, the property need not be remeasured. Property appraised since 1978 will be reviewed and brought up-to-date.

Taxpayers will be mailed a form prior to their appraisal asking them to enumerate

interior components of their property. The taxpayer additionally will be advised approximately when the appraiser will be making the field inspection. If the taxpayer is available when the appraisal is done, the appraiser will review the form with the taxpayer for completeness and correctness, and request permission to enter the residence to make a determination of depreciation of the property. Obvious errors and discrepancies will be resolved at this time. If for some reason the taxpayer has not completed or received the pre-mailed listing document, the appraiser will inspect the property with taxpayer assistance and consent. If the taxpayer is unavailable for the inspection of the property or refuses to allow the appraiser to inspect the interior of the home, that will be noted on the property record card and the appraisal will be estimated using the best available information. In this case, the appraiser will leave behind a copy of the listing document indicating the assumptions made about the house that will be used to make the appraisal. The taxpayer will have 20 days in which to respond to the data used in estimating the appraisal and schedule a convenient date for the Property Assessment Division appraisers to review his appraisal. If no negative response is received in that period of time, the estimated appraisal will be deemed to be correct.

No callbacks will be made to the property unless specifically requested by the taxpayer or the appraisal supervisor, area manager or bureau chief.

The Department of Revenue will not recheck estimated appraisals unless the property owner allows access to the interior of the structure for purposes of making a true and equitable appraisal. Should the property owner question the appraisal when value notification occurs, but continue to deny access to the interior of

the structure for purposes of appraisal, the owner will be instructed to file and appeal pursuant to Chapter 15-15-101 thru 104 of the Montana Code Annotated.

During the appraisal cycle, it will be the goal of the Department of Revenue to work toward automating residential appraisals to achieve an automated pricing function and a value notification listing function. Automation of commercial property, if possible, will be limited to carrying only the appraised value for value notification purposes at the end of the reappraisal cycle.

Residential and commercial lots and tracts will be valued as of January 1, 1982. Accumulated market data available to the Department of Revenue along with all data solicited from realtors, fee appraisers, lending institutions, knowledgeable buyers and sellers will be analyzed and serve as the basis for valuing all residential and commercial lots and tracts. This data will be collected from the time period January 1, 1979 to January 1, 1982 and adjusted to January 1, 1982 by comparison of multiple sales on similar property.

For residential and commercial property, the Department will rely on one or more of the following three approaches to value: the market data approach, the income approach and the cost approach. Residential appraisals, once automated, will rely heavily on the cost approach with adjustments for comparable sales through sales ratio studies.

At the request of the Revenue Oversight Committee, effective for tax year 1983, the fixed percentage reductions associated with the 20% farm home discount, local indexes and developers discount, will be eliminated. The appraisal of farm homes, property in small, rural communities and newly developed subdivi-

sions will reflect the market conditions associated with these types of property. For farm homes, the appraiser will give consideration in the appraisal for the fact that the farm home generally sells with the farm. If the appraiser can demonstrate that farm homes generally sell for less than similar property because of the distance to an urban area, the property may receive a reduction from the normal appraised value in accordance with the appraiser's judgement. If there is more than one residence on a farm, each residence will receive that consideration. Homes on small tracts and farm homes near enough to the community to be reasonably used as commuter residences will not receive this consideration. Residential and commerical property in rural communities may receive reductions if the appraiser has evidence that the property is selling for less than comparable property in urban areas. In subdivisions, consideration should be given for the rate at which lots are selling in that development, prevailing interest rates, and the present worth of future income, when appraising the subdivision land. All of these considerations, if allowed, will be supported in fact by the local appraiser.

AGRICULTURAL AND TIMBER APPRAISAL PLAN

The goal of agricultural and timber appraisals for the remainder of the cycle will be to complete three appraisals per day per appraiser assigned to agricultural appraisals. These three appraisals will be based on ownership rather than parcels, and will include appraisal of the farmstead buildings. The first priority of the agricultural appraisal process will be to clear up inequities that exist within certain counties (Attachment B). The present status of properties in all other counties will be reviewed and updated. Problems present in these counties will also be address and corrected.

Use changes will be kept current annually on both agricultural and timber land.

Agricultural and timber appraiser/classifiers will be required to be certified in accordance with Attachment A of this plan.

For purposes of valuing agricultural and timber land, present agricultural manuals will be used through tax year 1985. Beginning tax year 1986, agricultural and timber lands will be valued in accordance with administrative rules adopted by the Department of Revenue. A hearing date will be set for that rule adoption once the proposed changed have undergone review and comment by the appropriate affected groups. For agricultural land, the method will comprise taking commodity prices less cost of production data over a five year average commencing January 1, 1977 through January 1, 1982. Timber values will be determined in a manner similar to that in the past; lumber values minus logging costs less an adjustment for time required for harvesting will be applied to stand volume tables to value the standing timber. A value on the land under the timber equal to its grazing capacity will be applied in accordance with agri-

cultural land values established. The timber values will be based on data over the 5 year period commencing January 1, 1977 through January 1, 1982. Beginning tax year 1986, agricultural and timber land will be put on the tax rolls using the new value data. Until that time, the existing valuation schedules will continue to be used. All property owners affected by a change in classification, grading or valuation will receive a notice reflecting such by early 1986, allowing these owners sufficient time to discuss their appraisals prior to tax calculation for tax year 1986. The notice form AB-2A will be accompanied by form AB-16 for agricultural land. Agricultural and timber property will be appraised using form AB-9, copies of which are available through the Department of Revenue. A mailer form will be utilized for determining timber changes (cutting, fires, disease, etc.). This form will be mailed to timber owners for reporting such changes.

Daily work progress reports will be completed and submitted monthly for every county. Those work progress reports will assess plan performance against actual accomplishments, and identify those factors that directly affect the appraisal performance in any given month. The form shall be provided by the Department of Revenue.

INDUSTRIAL APPRAISAL

There are approximately 420 industrial properties in the State of Montana. These properties will be appraised centrally and the values distributed to the appropriate county assessor. Each industrial property will be appraised or reviewed prior to January 1, 1986.

Industrial appraisers will be required to be certified in accordance with Attachment A.

Industrial property will be valued as an entity. Class 8 property of the entity will be valued on an annual basis in accordance with Department established schedules. Class 4 property will be valued using the July 1, 1976 Marshall Valuation Service Manual until the end of the current cycle. Beginning tax year 1986, the January 1, 1982 Marshall Valuation Service Manual will be used to value industrial property. In cases where the property is not adequately identified in the Marshall Valuation Service Manual, other cost construction manuals such as Boeckh or Means will be used with a publication date as close to Marshall Valuation Service as possible.

For industrial property, the Department will rely on three approaches to value: the market data approach, the income approach and the cost approach, with the cost approach being the most reliable.

The Industrial Appraisal Bureau will identify, by county, the industrial property which is the responsibility of the Bureau. The coordination of industrial property appraisals to commercial appraisals is further outlined in Attachment C.

Attachment A

CERTIFICATION REQUIREMENTS

PROPERTY ASSESSMENT DIVISION

Certification of all appraisers employed by the Department of Revenue for the tax appraisal of residential, commercial, industrial and agricultural properties is mandated by 15-7-105 through 15-7-107, M.C.A. The Department of Revenue, Property Assessment Division has adopted the following specific certification requirements for these property types.

RESIDENTIAL PROPERTY

A. Training and Testing

1.) Training sessions will be offered in March and August of each year.

2.) Each employee must participate in and pass the first training session held after their date of employment. Failure to pass this training session will require the employee attend and pass the next available training session. Failure to pass the second training session will constitute grounds for dismissal.

B. Narrative Report

1.) Each employee will be notified when they pass the residential training session and exam. A residential narrative report must be submitted within 6 months of the notification date.

2.) The employee will be allowed up to 40 hours of administrative leave to complete the residential narrative report. The employee's supervisor will determine when such leave can be taken.

3.) The residential narrative report must include:

(a) title page
(b) letter of transmittal
(c) table of contents
(d) assumptions and limiting conditions
(e) photographs of subject property
(f) identification of property
(g) purpose of appraisal
(h) definition of market value
(i) date of appraisal
(j) assessment and taxes
(k) city data
(l) neighborhood data

(m) site data
(n) plot plan
(o) zoning
(p) description of improvements
(q) construction features
(r) property history
(s) highest and best use
(t) estimate of remaining economic life
(u) cost approach with summary
(v) market data approach with summary
(w) income approach with summary
(x) correlation and final estimate of value
(y) certification
(z) qualification of appraisers
(aa) addenda and exhibits

4.) Within 2 months of receipt of the residential narrative report by the Department of Revenue - Property Assessment Division, the employee will be notified whether the report meets criteria designating it as acceptable. Any report deemed unacceptable will be returned to the employee for correction. The employee will have 2 months from the date it is returned by the Revenue Department to resubmit the residential narrative report.

The Department of Revenue will not authorize any additional administrative leave for purposes of report correction.

C. Experience

1.) Upon successful completion of steps (A) and (B), the employee must complete one year of actual residential appraising under the direction of his immediate supervisor. The commencement of the year experience requirement will coincide with the employee's date of employment.

D. Waivers

1.) Individual steps may be waived by the Property Assessment Division if sufficient proof is given that the employee has previously met such requirements.

COMMERICAL PROPERTY

A. Prerequisite

1.) Previously certified in appraisal of residential property.

B. Training and Testing

1.) Training sessions will be offered in March and August of each year.

2.) Each employee must participate in and pass the first training session held after being assigned commercial appraisal responsibilities. Failure to pass this training session will require the employee attend and pass the next available training session. Failure to pass the second training session will constitute grounds for dismissal if the position requires such certification or demotion back to a residental appraisal position if available.

C. Narrative Report

1.) Each employee will be notified when they pass the commercial training session and exam. A commercial narrative report must be submitted within 6 months of the notification date.

2.) The employee will be allowed up to 80 hours of administrative leave to complete the commercial narrative report. The employee's supervisor will determine when such leave can be taken.

3.) The Commercial narrative report must include:

(a) title page
(b) letter of transmittal
(c) table of contents
(d) assumptions and limiting conditions
(e) photographs of subject property
(f) identification of property
(g) purpose of appraisal
(h) definition of market value
(i) date of appraisal
(j) assessment and taxes
(k) city data
(l) neighborhood data
(m) site data
(n) plot plan
(o) zoning
(p) description of improvements
(q) construction features
(r) property history
(s) highest and best use
(t) estimate of remaining economic life
(u) cost approach with summary
(v) market data approach with summary
(w) income approach with summary
(x) correlation and final estimate of value
(y) certification
(z) qualification of appraisers
(aa) addenda and exhibits

4.) Within 2 months of receipt of the commercial narrative report by the Department of Revenue - Property Assessment Division, the employee will be notified whether the report meets criteria designating it as

acceptable. Any report deemed unacceptable will be returned to the employee for correction. The employee will have 2 months from the date it is returned by the Revenue Department to resubmit the commercial narrative report.

The Department of Revenue will not authorize any additional administrative leave for purposes of report correction.

D. Experience

1.) Upon successful completion of steps (A) and (B), and (C), the employee must complete one year of actual commercial appraising under the direction of his immediate supervisor. The commencement of the year experience requirement will coincide with the employee's notification of being assigned commercial appraisal responsibilities.

E. Waivers

1.) Individual steps may be waived by the Property Assessment Division if sufficient proof is given that the employee has previously met such requirements.

AGRICULTURAL PROPERTY

To become fully certified as an agricultural/timber classifier (appraiser) for property taxation purposes in Montana, an individual must successfully complete the following requisites:

A. Training and Testing

1.) Training sessions will be offered in January and July of each year.

2.) Each employee must participate in at least one annual training session offered by the Department of Revenue, and successfully pass the examination offered in either agricultural or timber land classification or both. Failure to pass this training session will require the employee attend and pass the next available training session. Failure to pass the second training session will constitute ground for removal from agricultural/timber appraisal responsibilities, or for dismissal.

B. Narrative Report

1.) Each employee will be notified when they pass the agricultural/timber land training session and exam. A narrative report must be submitted within 6 months of the notification date.

2.) The employee will be allowed up to 80 hours of administrative leave to complete the agricultural and/or timber land narrative report. The employee's supervisor will determine when such leave can be taken.

3.) The employee must submit at least 1 completed appraisal (classification)

of an ownership large enough and diverse enough to adequately demonstrate the ability to differentiate between classes and productive grades of land. Materials submitted for this demonstration appraisal shall include:

(a) copy of ownership plat in which property is situated
(b) copy of property record card (AB-9) properly completed
(c) copy(ies) of field notes properly completed
(d) copies of soil survey information utilized
(e) copy of milar overlay of area (ownership) and comparable adjoining properties. This will show the number of acres in each class and grade of land by 40 acre tract or fractional lost for both the subject property and comparables
(f) copies of other pertinent data utilized in classifying and grading the property including precipitation information
(g) a narrative explaining and justifying the classifications and grading established should be given in detail

4.) Within 2 months of receipt of the agricultural and/or timber narrative report by the Department of Revenue - Property Assessment Division, the employee will be notified whether the report meets criteria designating it as acceptable. Any report deemed unacceptable will be returned to the employee for correction. The employee will have 2 months from the date it is returned by the Revenue Department to resubmit the agricultural and/or timber narrative report.

The Department of Revenue will not authorize any additional administrative leave for purposes of report correction.

C. Experience

1.) One year of actual classification experience in either agricultural or timber land classification or both shall provide the final step in becoming certified as either an agricultural or timber classifier/appraiser or both. This last step requires having completed parts (A) and (B) mentioned previously.

D. Waivers

1.) Steps (B) and (C) may be waived at the discretion of the Department of Revenue, if an individual possesses and provides proof of certification as an agricultural or timber appraiser (classifier) or both from some other state as applied in property taxation.

E. Requirement Date

1.) Those individuals who have at least one year of experience and have successfully passed the certification exams for agricultural/timber classification prior to November 1, 1981 as offered by the Montana Department of Revenue, Property Assessment Division, shall be considered to have met prior certification requirements, and will be issued a certificate to that effect.

INDUSTRIAL PROPERTY

No person may take the examination for appraising industrial property unless he holds a certificate in appraising residential property (15-7-106 (4) MCA).

Prior to receiving a certificate to appraise industrial property, he/she must successfully complete the following requirements:

1.) Successfully complete an advanced course of instruction on the various methods of property appraisal, and write a comprehensive examination in industrial appraisal.

2.) Complete one (1) year of responsible industrial property appraisal.

3.) Appraise or assist in the appraisal of at least three (3) separate plants in different industrial processes.

4.) Write an abbreviated narrative appraisal report defining the particular industrial process, explaining the depreciation used and substantiating the value conclusion.

5. The preceding requirements may be waived for persons who have been certified as industrial property appraisers in another state and he/she has demonstrated his/her competence by completing requirement #4.

Attachment C

MEMORANDUM

TO: Bob Holliday, Chief
Industrial Property Bureau

Randy Wilke, Chief
Residential and Commercial Property Bureau

FROM: Gregg Groepper, Administrator
Property Assessment Division

DATE: December 29, 1981

RE: Delineation Between Commercial and Industrial Property

As we discussed previously, there are some gray areas between industrial and commercial property in processes such as grain elevators, egg farms, meat packing plants and bottling plants. It would appear the most appropriate way to distinguish which Bureau is responsible for the property in those particular firms would be to approach it on the basis of size.

It will be the Industrial Property Bureau's responsibility to identify the industries, by firm and county, that will be appraised by the Industrial Property Bureau. As part of this delineation, the Bureau will also establish the cut-off on size below which the Industrial Property Bureau crew will not handle.

For example: on ready-mix plants, the Industrial Property Bureau would identify, by count, number, and firms, the ready-mix plants that would be centrally appraised. Additionally, the Bureau would determine the real property dollar value cut-off for that industry. Firms with real property values lower than the cut-off would be the responsibility of the county appraiser. That list would be published and distributed to all the county appraisers along with the justification for the dollar value floor.

It will be the responsibility of the county appraisers to bring to the Residential and Commercial Property Bureau's attention any firms in that particular industry that were missed and should be the responsibility of the Industrial Property Bureau. Further, if a county appraiser needs assistance in a particular industry that is his responsibility, he would request that assistance through the Residential and Commerical Property Bureau Chief. The Industrial Property Bureau will then attempt to provide assistance on that particular firm when they are in the area.

I realize this guideline is not all inclusive. Hopefully it will solve the majority of conflicts. The remainder can be dealt with on an individual basis consistent with the responsibilities of the two Bureaus.

GG/kcD

Purpose and Scope of Manual

The purpose of this manual is as follows:

1. To present guidelines for uniform appraisal procedures in all counties.

2. To make available construction cost data that can be adapted to accomplish appraisals at true market value in all counties.

3. To present appraisal procedures, principles, and cost data in a form that will be usable by both experienced and inexperienced appraisers.

The content and scope of the material included in this manual has been determined by the following considerations:

1. The manual will provide the principles and cost information necessary to appraise the bulk of the property to be appraised.

2. The "replacement cost" approach to market value, for which the cost section of this manual is designed, is usually appropriate for the kinds of property covered in this manual.

3. The data needed to determine the replacement cost of each improvement can also be used to determine which properties are comparable, thus permitting the fullest possible additional use of the market data approach.

4. Because of the large number of residential properties, there are usually many valid sales. Therefore, residential property for which a sale price is not known can be compared with those for which the sale price is known. Replacement value as estimated by this manual can thus be checked against market value on enough residences to establish the true relationship.

5. Commercial and industrial properties not included in this manual often pose the following appraisal problems:

(a) Lack of standardized construction features complicates the use of the cost approach.

(b) Lack of comparability on a cost basis.

(c) Few comparable structures.

(d) Few comparable sales.

(e) The market value of these properties arises primarily from their ability to earn income. Since the other approaches to value are frequently not conclusive, the income approach becomes a valuable tool. The use of the income approach is beyond the scope of this manual.[1] The inexperienced appraiser should seek assistance in the appraisal of complex commercial and industrial properties.

As the need arises, and as our facilities permit, cost schedules included in this manual will be brought up to date, and additional schedules will be prepared covering other kinds of buildings and improvements.

Market Value Defined

Three widely accepted definitions of "market value" are as follows:

1. The highest price in terms of money which a property will bring if exposed for sale in the open market, allowing a reasonable time to find a purchaser who buys with knowledge of all the uses to which it is adapted and for which it is capable of being used.

2. The price at which a willing seller would sell and a willing buyer would buy, neither being under abnormal pressure.

3. The price anticipated if a reasonable time is allowed to find a purchaser and if both seller and prospective buyer are fully informed.[2]

"Current" Defined

The need for a continuous effort to keep appraisals current results from any of the following conditions:

1. The former appraisal on some properties may have been incorrect.
2. The construction of new buildings, major additions or remodeling.
3. Changes in the real estate market for some or all types of property.
4. Significant changes in value that occur because of physical deterioration, obsolescence, or for economic reasons.

Keeping appraisals current means changing values whenever definite value changes actually occur. It is recommended that part of the appraisals in each county be reviewed, and if necessary, reappraised each year so that all locally appraised properties are adjusted to current values at least once in each five year period. This requires constant work in most counties.

[1]For a full discussion of the income approach to value see The Appraisal of Real Estate, American Institute of Real Estate Appraisers, 36 South Wabash Avenue, Chicago, Illinois, 1964. Many other texts on the subject are also available.

[2]American Institute of Real Estate Appraisers, Appraisal Terminology and Handbook, 1967, p. 131.

Three Approaches to Value

Appraisers use three separate approaches to value, either singly or in combination. If used in combination, the values derived by the different approaches are not averaged. Rather the appraiser uses the results to aid his judgment in arriving at an estimate of value. A list and brief description of the three approaches to value follows:

1. Cost Approach. The use of the cost approach involves determining the present new cost of reproducing the subject building with an identical structure or replacing it with a less costly but equally functional structure of more modern design. To arrive at present market value the reproduction or replacement cost must be reduced by the amount that physical depreciation and functional obsolescence, of the building itself or because of location of the building, has reduced the market value of the building below the present reproduction or replacement cost.

Since much judgment is required in determining realistic physical and functional depreciation in older buildings, the cost approach is relatively more satisfactory when applied to newer structures. With older residences it is especially necessary to check depreciated reproduction values with market data on comparable buildings.

The cost approach determines the upper limit of market value of improvements since it may be assumed that a buyer will build rather than pay more than the reproduction or replacement cost of an existing building.

2. Market approach. The market approach consists of determining the selling price of properties on which recent sales have occurred, determining whether the selling price meets the definition of market value as outlined heretofore, and relating the known sales prices to comparable property. This is the principal approach in valuing unimproved residential land. It is a well adapted approach in the valuation of residential improvements in conjunction with the cost approach, since the comparability of different dwellings can be determined by the same data that goes into the determination of reproduction or replacement cost. The market approach check on reproduction value is especially necessary on older residences since it is a way of determining the effect of physical and functional depreciation on market value.

3. Income approach. The income approach is especially applicable to income-producing property. Since such property is presumably purchased because of it's income earning ability, it's market value can be assumed to be the present value of future net income. The use of this method to determine the market value of land and improvements requires a prediction of the following facts:

(a) The annual fair net rental value of the property to be appraised. The net income to consider is not that from any one tenant but rather the fair annual rental value of the subject property as determined by competitive rental conditions, or economic rent. Or net income can be determined by subtracting expenses from gross income.

(b) The duration of the net income stream.

(c) The rate of recovery of capital necessary to attract investors in similar property.

(d) The interest rate necessary to attract investment in similar property.

(e) Thus it may be seen that much of the information necessary for proper use of the income approach must come from market data.

The income approach is least complex when it is applied to income-producing land where the income is usually assumed to be perpetual. In this case, it is only necessary to divide the appropriate interest rate into the estimated future net income to find the present reasonable investment value. When a refined approach to the present value of a terminable future income is required, the process is more complex.

The foregoing discussion of the income approach is presented primarily to define this approach and point out some complexities encountered in its use.

Procedure for Gathering Market (Sales) Data

A determined effort should be made by every appraiser to gather, screen and store for present or future use, sales as they occur in various areas of his county. These sales should be segregated by single family residential, multi-family, commercial and vacant lots and tracts. The collection of this data becomes necessary for the following reasons:

1. Sales are necessary for the determination of economic obsolescence.

2. The true market value of residential, commercial and industrial land can only be determined from actual screened sale prices of such property or comparable property.

3. Sales data on improved property usually lump both land and improvements together. The separate value of land and improvements on each property is needed in order to make fullest use of the sales-appraisal comparisons. Recent sales of comparable vacant lots with equally available utilities are very significant since they are helpful in separating land from improvement values.

4. Sales prices of older residences indicate to what extent physical depreciation and functional obsolescence have affected the market price or to what extent inflation has increased real estate values in any age category.

In selecting sales for sales-appraisal comparisons, care must be taken to use only sales that reflect true market value. To meet the definition of true market value, a sale must be at the highest price which a property will bring if fully exposed for sale in the open market, and is purchased by an informed buyer. The sale must reflect the full price paid for the subject real estate, but the price should not include a consideration for personal property that may have been included. The payment conditions, unless they depart greatly from the normal, should not have a noticeable effect on the sale, and there must have been full exposure on the open market. Circumstances surrounding a sale should be examined to evaluate whether the consideration represented market value. If the transaction was a tax sale, sale between relatives, sale to a government agency, sale to a church, sale to a charitable organization, an inter-company sale, a judicial sale, etc., the sale might not meet the

definition of an arms length transaction. It is recommended such sales, if used at all, be very carefully checked for undue influence.

GRADING OF SINGLE FAMILY RESIDENCES

The accuracy of a residential appraisal depends largely upon the selection of the correct grade. Grade represents quality. Quality applies to both workmanship and type of materials used. The combination of high quality workmanship and high quality materials reflects increased cost and value. Proper grading is essential in selecting the correct pricing schedule to obtain realistic replacement cost. The cost of a dwelling constructed of high quality materials and with the best of workmanship throughout will be substantially greater than that of one built from the same floor plan with inferior materials and workmanship.

The schedules in this manual have been developed to distinguish between variations in cost and represent the full range of conventional single family residential construction. The specifications as to type of facilities may not vary greatly between grades, however, the quality of materials, workmanship and design may be decidedly different.

The majority of dwellings fall within a definite grade of construction incorporating average quality of workmanship and materials. Consequently, better quality of construction, or construction of cheaper quality, can be determined by comparison with the average. A thorough inspection of both the inside and outside of a structure will reveal evidence of degrees of quality.

There are many chances for error in selecting the proper grade for a residence, such as grading the housewife's housekeeping ability, giving

too much credit to the landscaping, being influenced by a new paint job, or the lack of maintenance. Always look for quality or the lack of it, and if the house happens to be in the older bracket try to picture the quality it represented when new, and grade it as if it were new. Adjustments for condition will be made through application of depreciation.

This manual has eight basic grades of single family residences as follows:

1. 1F-1 Sub Standard, single family residence.
2. 1F-2 Poor Grade, single family residence.
3. 1F-3 Fair Grade, single family residence.
4. 1F-4 Slightly below average, single family residence.
5. 1F-5 Average, single family residence.
6. 1F-6 Good, single family residence.
7. 1F-7 Very good, single family residence.
8. 1F-8 Excellent, single family residence.

The basic grade, representing costs of construction with average quality of workmanship and materials involved, is designated as Grade 1F-5.

Grading would be a relatively simple process if all houses were built to conform to the base specifications outlined in this manual. Since this ideal condition does not exist, it becomes necessary to further refine the grading system. It is not unusual for conventional houses to be built incorporating construction qualities that fall in between the specifications of these established grades. If the house that is being appraised does not fall exactly in a specific grade, the grade designation

should be adjusted as deemed necessary by the use of a percentage factor to reflect quality features that are only slightly better or poorer than the specifications.

DEPRECIATION

Depreciation goes to work immediately upon completion of a building and continues until the building is no longer usable. It is used in the cost approach to value and is the difference, stated as a percentage, between the current replacement cost of the building and its estimated market value.

The three types of depreciation that can effect value are physical deterioration, functional obsolescence and economic obsolescence. These are further broken down into curable and incurable.

Physical depreciation can be detected and recognized by personal inspection. It may consist of wear and tear of such items as gutters and downspouts, windows and screens or there may be a need for painting or redecorating. Loose siding, missing shingles, rusted flashings and valleys, cracked plaster, loose electrical switches and broken fixtures, leaking plumbing or a furnace or boiler in bad repair are among other indications of physical deterioration. These conditions are usually curable and should be a part of the normal maintenance given the structure. There are, however, other evidences of the deterioration of the bone structure of a building, such as a settling of foundations, cracked bearing walls, broken floor joists or sagging rafters that might indicate an incurable condition because it may not be economically sound to repair the defects.

Functional obsolescence reflects the loss of value because of decreased utility or desirability in a structure caused by such things as outmoded plumbing or heating, insufficient electrical outlets or abnormally high ceilings, etc. these are usually curable. Other conditions, such as outmoded architecture, a poor floor plan, or columns and bearing walls that interfere with the proper utilization of space, may not be possible to cure or may not be curable from an economic standpoint. It is possible to build an undesirable feature and functional obsolescence into a new building.

Economic obsolescence is caused by forces outside of the building itself, such as business encroachment into a residential district or an influx of inharmoneous inhabitants into a neighborhood. It is very seldom, if ever, curable.

If abnormal depreciation is applied to a building, be sure to explain the reasons on the back of the appraisal card.

JANUARY 1, 1982

MONTANA APPRAISAL MANUAL

DATA COLLECTION SECTION

Rev. 03/84

TABLE OF CONTENTS

PART I - GENERAL INSTRUCTIONS ..... I - 1

Introduction ..... I - 2

Organization of the RDCF ..... I - 3

Data Transcription ..... I - 7

PART II - PARCEL ENTRY AND EDIT ERROR
PRINTOUT EXPLANATION ..... II - 1

Printout Formats ..... II - 2

Parcel Entry Error Messages ..... II - 6

PART III - GENERAL PARCEL EDIT ERROR MESSAGES ..... III - 1

PART IV - KEY DATA ITEMS 101.1

Part V - IDENTIFICATION DATA ITEMS 201.1

Part VI - LAND DATA ITEMS 301.1

PART VII - TOTAL PROPERTY DATA ITEMS 401.1

PART VIII - BUILDING DATA ITEMS 501.1

PART IX - ACCESSORY DATA ITEMS 601.1

PART X - STAFF DATA ITEMS 701.1

DATA COLLECTION

MANUAL

Rev. 03/84

PART I

GENERAL INSTRUCTIONS

RESIDENTIAL DATA COLLECTION FORM

AMI RDCF-3

KEY DATA

→ 03 | 1

101	County	# 04	
102	Township	# 06	
103	Section	# 10	
104	Quarter Section 1 = NE, 2 = NW, 3 = SW, 4 = SE	12	
105	Quarter Section Block	# 13	
106	Quarter Section Lot	# 15	
107	Unit Number	# 17	
108	Sheet	# 21	
109	Total Sheets (only code on first sheet)	# 23	
110	Action Code 1 = Delete 2 = Add 3 = Replace	25	

IDENTIFICATION DATA

201	Municipality (if none enter XXX)	26	
202	Addition (if none enter XXX)	29	
203	Addition Block (if none enter 000)	32	
204	Addition Lot (if none enter 000)	35	
205	Levy District	38	
206	Ownership Type	# 42	
207	Property Type 1 = Res 2 = Apt 3 = Com 4 = Ind 5 = Agr, 6 = Other, 9 = Exempt	44	
208	Property Street Number	# 45	
209	Property Street Name	50	52
		55	
210	Property Zip Code (59_ _ _ _ _ _)	# 70	
211	Short Legal Description (if none enter X)	→ 01	2
	02		
	23		
	44		
	65		
	86		
212	Assessor's Code	107	
213	Map Code	114	
214	Percentage of Ownership (⅓ = 5000 ⅓ = 3333 ¼ = 2500)	% 123	
		→ 01	3
215	Owner Last Name	02	
216	Owner's First Name	18	
217	Second Owner's Initials (if no enter XX)	30	
218	Owner Address Line No 1 (if not used enter X in 1st col.)	32	
219	Owner Address Line No 2 (if not used enter X in 1st col.)	53	
220	Owner Address Line No 3 (if not used enter X in 1st col.)	74	
221	Owner Zip Code (if none enter 0's)	95	

LAND DATA

→ 01 | 4

301	Unit of Measure 0 = None 1 = F F 2 = S F 3 = Acre 4 = Site		02	
302	FF	Width	Ft 03	
303		Depth	Ft 07	
304		Backlot Setback	Ft 11	
305		Triangular Factor 0 = None, 1 = Front Apex, 2 = Back Apex	15	
306		Standard Depth	Ft 16	
307	SF	Area	SF 20	
308	Acre	Area	Acres 26	
309	Unit Value		$ 32	
310	Site Value		$ 39	
311	Street Surface 1 = Paved 2 = Oil 3 = Gravel 4 = Dirt		45	
312	Water Source 0 = None 1 = Priv 2 = Comm 3 = Public		46	
313	Sewer 0 = None, 1 = Sanitary, 2 = Septic		47	
314	View Lot 0 = None, 1 = Average, 2 = Good		48	
315	Zoning		49	
316	Building Code Restrictions 0 = None 1 = Adq 2 = Exl		50	
317	Neigh Predom Use 1 = Single Family 2 = Multiple Family, 3 = Agricultural, 4 = Other		51	
318	Neigh Trend 1 = Declining 2 = Stable 3 = Improving		52	

TOTAL PROPERTY DATA

401	Local Index	% 53	
402	Principal Buildings	# 56	
403	Conformance To Neigh 1 = Underimproved, 2 = Typical 3 = Overimproved	58	

BUILDING DATA

→ 01 | 5

501	Structure Code	02	
502	Year Built	Yr 05	
503	Workmanship 1 = Poor 2 = Typical 3 = Outstanding	09	
504	Condition 1 = Poor 2 = Fair, 3 = Avg., 4 = Good, 5 = Excellent	10	
505	Quality Grade (1-8) or (L, A, G, E)	11	
506	Grade Variation (enter 000 if none)	± % 12	
507	Effective Age	Yrs 15	
508	Physical Depreciation	% 17	
509	Functional Obsolescence	% 19	
510	Economic Obsolescence	% 21	
511	Per Cent Complete	% 23	
512	Stories (1 0, 1 5, 2 0, 2 5 etc.)	26	
513	Foundation 0 = None 1 = Piers/Posts 2 = Conc 3 = Slab	28	
514	Wall Construction 1 = Frame 2 = Bk 3 = Brk 4 = Log	29	
515	Exterior Finish 1 = Stucco 2 = Shingle 3 = Single 4 = Log 5 = Asbestos 6 = Alum 7 = Siding/Sheathing 8 = Brk, 9 = Other	30	
516	Roof Type 1 = Flat, 2 = Hip, 3 = Gable, 4 = Gambrel, 5 = Shed, 6 = Mansard, 7 = Arched, 8=A-Frame	31	
517	Roofing Material 1 = Wd Shingle, 2 = Slate 3 = Tile 4 = Copper 5 = Metal, 6 = Wd Shakes 7 = Comp Roll or Tab 8 = Tar & Gravel 9 = Asbestos Shingle	32	
518	Ornamental Exterior Brick/Stone Area	S F 33	
519	Solar Collector Area	S F 37	
520	Basement Area	S F 41	
521	Finished Basement Area	S F 45	
522	Finished Basement-Quality Grade Diff	± % 49	
523	Daylight Basement 0 = No 1 = Yes	51	
524	Heating Source 0 = None, 1 = Coal, 2 = Oil, 3 = Gas, 4 = Elec, 5 = Solar, 6 = Wood 7 = Geothermal	52	
525	Heating System 1 = Floor Wall, 2 = Hot Water, 3 = Steam, 4 = Gravity Hot Air, 5 = Forced Hot Air, 6 = Radiant/Heat Pump, 7 = Electric Baseboard, 8 = Package A/C, 9 = Hot/Cool Air	53	
526	Central Air Cooling 0 = No, 1 = Yes	54	
527	Adequate Electricity 0 = No, 1 = Yes	55	
528	Living Rooms	# 56	
529	Dining Rooms	# 58	
530	Family/Den/Recreation Rooms	# 59	
531	Bedrooms	# 60	
532	Kitchens	# 62	
533	Built-Ins	# 63	
534	Full Baths	# 65	
535	Half Baths	# 66	
536	Hot Water Heater	# 67	
537	Kitchen Sinks	# 68	
538	Other Single Fixtures	# 69	
539	Utility Type Rooms	# 70	
540	Mobile Home Width	Ft 71	
541	First Floor Area	S F 73	
542	Upper Floor Area	S F 77	
543	Unfinished Floor Area	S F 81	
544	Half Story Area	S F 85	
545	Unfinished Half Story Area	S F 89	
546	Attic Area	S F 93	
547	Finished Attic Area	S F 97	
548	Finished Attic-Quality Grade Diff	± % 101	
549	Heated Area	S F 103	
550	Fireplace Chimneys	# 107	
551	Total Chimney Heights (1 0, 1 5, 2 0 etc.)	108	
552	Fireplace Openings (Total)	# 110	
553	Pre-Fab Fireplaces/Stoves	# 111	
		→ 01	6
554	Enclosed Porch Area	S F 02	
555	Open Porch Area	S F 06	
556	Deck/Patio Area	S F 10	
557	Basement Garage Area	S F 14	
558	Attached Garage Area	S F 18	
559	Attached Carport Area	S F 22	
560	Flat Add Cost	± $ 26	

ACCESSORY DATA

601	Building Type 0 = None, 1 = Detached Garage, 2 = Detached Carport, 3 = Outbuilding, 4 = Shed	33	
602	Stories (1 0, 1 5, 2 0, 2.5, etc.)	34	
603	Wall Construction 1 = FR 2 = Bk 3 = Brk 4 = Log	36	
604	Ground Area	S F 37	
605	Finished Area	S F 41	
606	Flat Add Costs	$ 45	
607	Quality Grade	(1-8) 49	
608	Effective Age	Yrs 50	
609	Flat Value	$ 52	
610	Pool Type 0 = None, 1 = Plastic, 2 = Poured Concrete, 3 = Gunite, 4 = Fiberglass	57	
611	Pool Area	S F 58	
612	Quality Grade (1-8)	62	
613	Effective Age	Yrs. 63	
614	Flat Value	$ 65	
615	Concrete Area	S F 70	
616	Flat Value	$ 74	
617	Asphalt Area	S F 78	
618	Flat Value	$ 82	
619	Other Accessory Flat Add Values	$ 86	

STAFF DATA

→ 01 | 7

701	Cost Base Year Mo/Yr		02	0 1 | 8 2
702	Continued Review Needed		06	
703	Data Sources	0 = No, 1 = Yes Code Only 1 Yes	Prop. Record Card	08
704			Questionaire	09
705			External Inspection	10
706			Internal Inspection	11
707	Enumerated By		# 12	
708	Enumerated On		Mo/Yr 17	
709	Improvements App By		# 21	
710	Improvements App On		Mo/Yr 26	
711	Land Appraised By		# 30	
712	Land Appraised On		Mo/Yr 35	
713	1st Prev App Land Value		$ 39	
714	1st Prev App Imp Value		$ 46	
715	1st Prev Value Date		Mo/Yr 53	
716	Property Class Code Land		# 57	
717	Property Class Code Imp		# 61	
718	Year New Construction (19_ _)			66
719	Appraised Value New Const.		$ 67	

ADDITION

SECTION

BLOCK

TRACT OR LOT

TOWNSHIP =
RANGE =

ADDRESS OF IMPROVEMENTS

OWNER ADDRESS

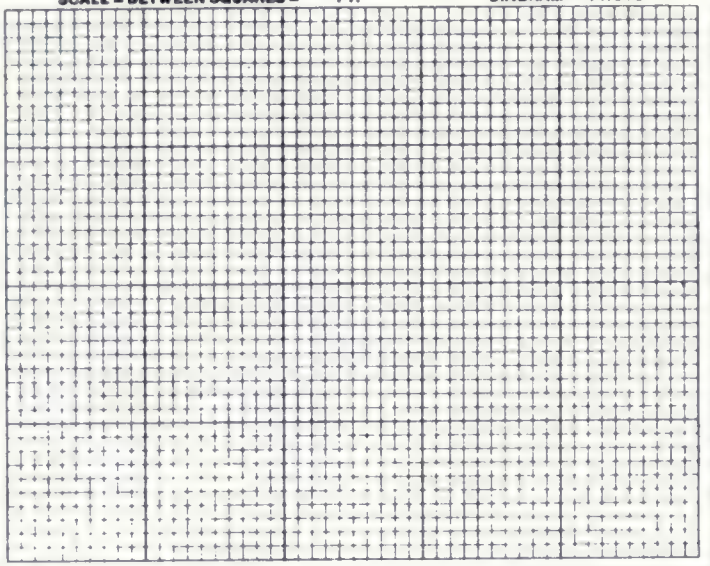
OWNERSHIP RECORD

OWNER	SALE DATE	TYPE	BOOK PAGE	TERMS OF SALE

SUMMARY OF VALUE CHANGE

DATE		VALUE	COMMENTS
	LAND		
	BLDG		
	TOTAL		
	LAND		
	BLDG		
	TOTAL		
	LAND		
	BLDG		
	TOTAL		
	LAND		
	BLDG		
	TOTAL		

SCALE = BETWEEN SQUARES = FT. DIAGRAM — PHOTO



REMARKS

Appraised by

Date

Priced by

Date

Reviewed by

Date

Change Notice Sent

SITE IMPROVEMENTS

SIDE WALKS	CURBING	ST PAVED	ST. OILED	ST DIRT	SEWER OR SEPTIC	WATER	GAS	ELEC-TRICITY

SITE COMPUTATIONS

FRONTAGE FIGURED	AVERAGE DEPTH	UNIT PRICE	UNIT %	FRONT FT PRICE	CORNER INFL.	TOTAL	ADJUSTMT.	MARKET VALUE
Sq Feet					@		/Sq Ft	
Acres					@		/Acre	
Site Value								

COSTING SECTION

Component	Quantity	Cost	Extension
First Story	X		$
Upper	X		
Half	X		
Brick/Stone	X		
Attic Finish	X		
Basement	X		
Basement Finish	X		
Heat	X		
Air Conditioning	X		
Plumbing	Flat		
Fireplace	Flat		
Built-ins	Flat		
Porch/Deck	X		
Garage/Carport	X		
BASE COST	→		$
Grade Variation (+ 5% = 1.05)			X
Replacement Cost New	→		$
Physical Depreciation	%		
Functional Obsolescence	%		
Economic Obsolescence	%		
Replacement Cost New Less Depreciation	→		$
Outbuilding-Replacement Cost New	→		$
Depreciation =	%	-	
Final Outbuilding Value	→		$
Concrete	X		
Paving (Asphalt)	X		
		Improvement Value	$
		Local Index	X
		Sound Value	$ *
		Lump Sums	$ *
		Value Other Bldgs	$ *
		Total Land	$
		(Includes Items Denoted By Asterisk) Total Improvement Values	$

INTRODUCTION

The Residential Data Collection Form provides a uniform means for recording all information essential to the valuation of residential properties. It also can be used to collect some parcel characteristics of non-residential properties; land, location, value, and owner name information. The RDCF is designed to facilitate both manual recording and computer entry.

Exhibits I and II display the RDCF. The following parts of the Manual define the specific procedures for entering data on the form, item by item. Each item is described on a separate page, in numerical order, with the item number appearing in the lower center of the page for quick reference.

When revisions are made to this Manual, the revision date will appear in the lower right-hand corner of the revised page. A table of contents with each pages' current revision date will accompany each update to this Manual.

Because of the necessity of gathering complete and uniformly consistent data, it is required that all data collectors follow the procedures set forth in this Manual. If these procedures are not followed the edit process the data goes through will list a considerable number of errors. It is suggested that the new data collector become familiar with the entire Manual by processing several "practice" properties before attempting to collect data on actual properties.

ORGANIZATION OF THE RESIDENTIAL DATA COLLECTION FORM

The data to be collected falls into seven major categories:

1.	Key Data	Items 101 thru 110
2.	Identification Data	Items 201 thru 221
3.	Land Data	Items 301 thru 318
4.	Total property Data	Items 401 thru 403
5.	(Principal) Building Data	Items 501 thru 560
6.	Accessory (Improvements) Data	Items 601 thru 619
7.	Staff Data	Items 701 thru 719

1. Key Data includes that group of items which uniquely identify a parcel, i.e., by which the parcel will normally be filed. These items contain the parcel's identifier's and also distinguish between the two or more sheets of the form sometimes required to describe the parcel characteristics .

2. Identification Data includes supplementary information about the type and location of the parcel, its legal description, and the mailing address of the taxpayer.

3. Land Data includes all items necessary to describe the parcel site, i.e., the land without consideration of any improvements which may exist on the site. Land measurements, physical characteristics, and relevant neighborhood and area influences are detailed.

4. Total Property Data includes those items related to the property as a whole, land and improvements together.

5. Building Data includes all items necessary to describe the significant features of a "principal" building, (i.e., a residence) physical features, measurements, quality and depreciation factors are detailed.

6. Accessory Data includes items pertaining to improvements on the parcel which are not a part of the principal building, (e.g., detached garage, shed, pool, paving, concrete area, and other additions to the parcel which constitute significant value).

7. Staff Data includes items which identify the individual completing the RDCF, the improvement appraiser and the land appraiser who are responsible for the information entered on the RDCF.

Where the property being appraised consists of only one principal building (or no principal building), with limited accessory improvements, all data concerning the parcel will be recorded on a single sheet. That sheet will be numbered "01" (item 108) of "01" (item 109).

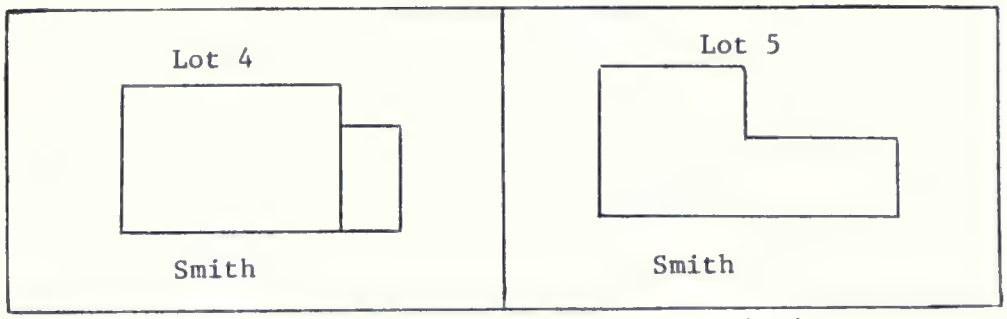
In a few cases, it will not be possible to record all accessory improvements on that sheet, or the land may be measured in more than one segment (items 301 thru 310). In such cases, the additional data is entered on succeeding sheets, numbered in sequential and

ascending order 02, 03, etc. (item 108). Total sheets (item 109) should be coded on only the first sheet. The first sheet must have total sheets coded to indicate the total number of sheets - first plus succeeding sheets.

When more than one principal building exists on a single parcel, sheet 01 will contain the data concerning the major principal building, the identification data, the land data, the total property data, accessory improvement data and the staff data. A separate sheet will be prepared for each additional principal building on the parcel. It will contain the data concerning that building and associated land segments or accessory buildings. Such sheets will be numbered in sequential and ascending order (02, 03, etc.). Any accessory improvements not recorded on sheet 01, and any additional land segment measurements (items 301 thru 310), will be entered on these succeeding sheets (and others if necessary). It should be noted here that a parcel is defined as consisting of all physically contiguous (abutting) lots under a single ownership. However, in the case of multi-lot parcels with multiple principal buildings, those lots which contain a single principal building may each be considered as a separate parcel. This is particularly true when such lots may sell independently. Further, a multi-lot parcel with a single principal building located on one of the lots, or with no principal building, should be considered separate parcels when the lots are likely to sell independently.

Two cases are illustrated on the next page.

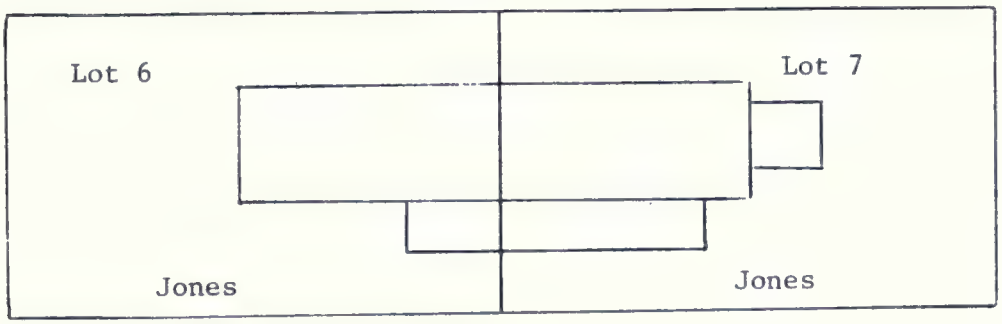
Two Parcels



Sold 6/25/70
For 25,000

Sold 11/23/73
For 30,000

One Parcel



Sold 9/11/71
For 50,000

The primary guideline in determining any breakup of multi-lot parcels is what typically sells in the area the parcel is located in.

When more than one sheet is required for a parcel, items 101 thru 107 must be identical on every sheet. And, as indicated above, the sheet number (item 108) must be different on each such sheet.

All items will be entered into the computer system. Land Data, Total Property Data, Building Data and Accessory Data comprise the variables that will contribute to the determination of property value. Using this data an appraiser or a computer program can determine a replacement cost for the property.

For this reason, accuracy and consistency in collecting and recording data on the RDCF require special attention, in order that proper and uniform valuations can be obtained from the computer assisted system. Even though some of the following procedures may appear trivial, and in some cases arbitrary, they must be considered rules and not just guidelines.

DATA TRANSCRIPTION

Data is recorded for each item in the ticked area to the right of the item name. The spaces between ticks (referred to henceforth as "columns") provide for the entry of one or more characters of data. The number just to the left of the columns is a column count used as a guide for data entry personnel. The data collector and appraiser should ignore these numbers.

The columns for certain items contain preprinted characters (i.e. 701). The data collector will not enter data for these items. All other items require entry of alphanumeric, or numeric data. Each of these types of data is described below.

Alphanumeric data/codes consist of letters, digits and/or punctuation characters making up some text. Alphanumeric data/codes are always entered starting with the leftmost column for the item (i.e., is "left justified"). Exhibit III displays the recommended style for entry of letters and digits. The following punctuation characters are also permissable:

+ * / = $, ; . " ( )

Following is an example of an alphanumeric entry:

218	Owner Address Line 1
32	2765 COUNTRY CLUB AVE

Numeric data consists only of digits, and is always entered such that the last digit is placed in the rightmost column (i.e., is "right justified"). Leading zeros need not (but may) be entered. Leading zeros are never required on the RDCF, however it is advisable to write the zeros in the applicable columns to ensure accuracy. Any blank columns will be assumed to be blank. You are responsible for the accurate coding of numbers.

In certain cases, a decimal point will be shown in place of a tick between columns, and then the numeric value must be properly aligned.

Where numeric data is measured in a specific unit of measure, an indication of that unit of measure will appear immediately before the column number (e.g., # for a count, $ for a dollar value, SF for square feet, % for percent, etc.).

102	Township	#06	0875

EXHIBIT III RECOMMENDED GRAPHICS FOR TRANSCRIPTION
(Sheet 1 Of 2)

Legible graphics are imperative for successful processing of data. The following represents examples of acceptable graphics.

0	Closed Circle with no added identifying characteristic.
1	Single vertical bar, no added identifying characteristic.
2	No loop at bottom.
3	Curved lines, no straight top line.
4	Open top to reduce confusion with 9.
5	Vertical and top lines joined at right angle.
6	Loop closed at bottom to avoid confusion with zero or lowercase b.
7	Crossbar used in Europe considered confusing with letter Z, and does not have support of USA community.
8	Made with two circles adjoining vertically to avoid confusion with special characters ampersand and dollar sign.
9	Straight leg from common usage.
A	Use of squared top not supported by sufficient evidence of confusion.
B	Overhang top and bottom is used to reduce possibility of confusion with numeral 8 or 13. Distinct center division required to avoid similarity to letter D.
C	No evidence of confusion. There is some similarity to left parenthesis if curve is not deep enough.
D	Overhang top and bottom is used to reduce possibility of confusion with numeral zero. This convention is similar to letter B.
E	Rounded left side is to be avoided to reduce confusion with ampersand.
F	Similar to letter E. Above.
G	Strong, emphasized serif reduces possibility of confusion with letter C or numerals 6 and zero.
H	Parallel sides.
I	Serifs top and bottom are de facto standard.
J	Top serif reduces confusion with letter U.
K	Slanting legs are joined at center.

EXHIBIT III RECOMMENDED GRAPHICS FOR TRANSCRIPTION
(Sheet 2 Of 2)

L	No Special Convention
M	Legs spread at bottom, center division extends to bottom of letter. Rounded tops should be avoided.
N	Parallel legs.
Ø	Virgule slanted right added to distinguish letter from numeral zero and letter Q.
P	Overhang at top added for consistency with letters B, D, and R.
Q	No special convention.
R	Overhang at top added for consistency with letters, B, D, and P.
S	Serif added at top only for ease of preparation and to distinguish letter from numeral 5 and special character dollar sign.
T	No special convention.
U	This convention adopted to distinguish from letter V and lowercase letter u.
V	No special convention required if the letter U has an identifying characteristic.
W	Center division extends to top of letter. Rounded bottom should be avoided.
X	No special convention.
Y	Vertical leg bisects angle formed by top legs to avoid confusion with numeral 4.
Z	Horizontal bar is de facto standard, and reduces confusion with "Z".

Adapted from "Proposed American National Standard",
Communications of the ACM, Volume 12, Number 12,
December, 1969, 696698

547	Finished Attic Area	SF 97	0,9,2,5

(Leading zeros not required)

309	Unit Value	$32	0,0,2,3,8.5,6

Coded data consists of one or more digits, each value representing a specific alternative from among a discrete set of alternatives which are explicitly shown after the item name. For example:

314	View Lot: 0 = None 1 = Average 2 = Good	48	2

316	Building Code Restrictions: 0 = None 1 = Adq 2 = Ext.	50	1

317	Neigh Predom Use: 1 = Single Family 2 = Multiple Family 3 = Agricultural 4 = Other	51	4

Date data consists of digits representing month and year, or year alone. For example, if the data on a RDCF was collected in March, 1982 (03/82), item 708 would be recorded as:

708	Enumerated on	Mo/Yr 17	0 3 8 2

Where an item is not applicable, or its value is not obtainable, enter zero. It is not necessary to code zeros in every column of an item one zero right-justified will suffice.

Failure to code a zero will result in an error message and an assumed value. Each item left blank in a section where other data has been coded will be flagged with a warning message. In order to reduce the number of error and warning messages, it is suggested that zeroes be coded in columns where no data is coded. Sections which are totally left blank ie 501-560 Building Data do not need zeroes coded. However, if you coded any fields in this section all other fields for the section should be coded. One exception to this rule is with non-residential properties where items 501, 502 and 560 are the only items coded.

PART II

PARCEL ENTRY

AND EDIT ERROR

PRINTOUT EXPLANATION

CONTROLS...BATCH ZX AREA 09 DATE: 04/16/84

STATE OF MONTANA DEPARTMENT OF REVENUE

RESIDENTIAL/COMMERCIAL PROPERTY BUREAU

ENTRY ERRORS AND COMMENTS

*** ENTRY EDIT STATISTICS ***

SHEETS SUBMITTED :	7
SHEETS NOT ACCEPTED :	0
SHEETS ACCEPTED :	7

CONTROLS...BATCH ZX AREA 09

CNTY	TWP	SECT	QTR	BLK	LOT	UNIT	SHEET	ACT	ERRORS AND COMMENTS
05	2881	15	1	34	01	TEST	01	2	W ***-PARCEL TO BE ADDED
05	2881	15	1	34	01	TEST	01	3	W ***-PARCEL TO BE REPLACED
05	2881	15	1	34	13	0013	12	1	W ***-PARCEL TO BE DELETED
05	2881	15	1	34	18	0024	01	4	W ***-PARCEL TO BE UPDATED
05	2881	15	1	34	18	0024	01	4	W ***-PARCEL TO BE UPDATED
05	2881	15	1	34	18	0024	01	4	W ***-PARCEL TO BE UPDATED
05	2881	15	1	34	18	0024	01	4	W ***-PARCEL TO BE UPDATED

*** FOR UPDATE PROCEDURES, REFER TO THE DATA COLLECTION MANUAL

INTRODUCTION

Parcel Entry Edit Error Processing consists of two steps, first entry then edit. Both steps produce a computer listing of messages which are generated by the computer for a batch of data. There are then two listings for each batch of data entered into the computer. Both listings have a similar format which consists of the printed key data for each parcel and one or more lines of "Errors and Comments" listing all the messages for that parcel. There is an example of entry and edit messages following this explanation.

PRINTOUT FORMAT

CONTROLS

A Control line is printed at the top of each page of the error printout. These controls are used to match the Parcel Entry Edit and Error Printouts with the respective batches of RDCF-3. The individual segments of the control line are:

BATCH

Each group of approximately 500 RDCF received from the counties by the Residential-Commercial Bureau is assigned an alphabetic code number or batch number. Each batch contains parcels from one area only.

AREA

The Area control number is the appraisal area from which the parcels are being transmitted. This control number is input to the computer by the Residential Commercial Bureau and is used by the system to ensure that counties within the batch are valid for the Area Master File that they will be processed with. Each parcel in a batch must have a valid county number for the Area.

ERROR LINE HEADING

A heading line is printed at the top of each page of errors (below the control line) which identifies what each of the columns in the error message line is. These column identifiers which make up the error line heading are:

Cnty	101	County
Twp	102	Township
Sect	103	Section
Qtr	104	Quarter Section
Blk	105	Quarter Section Block
Lot	106	Quarter Section Lot
Unit	107	Unit Number
Sheet.	108	Sheet
Act	110	Action Code

For each group of errors found in a parcel, the parcel identifier is printed on the left half of the entry/edit printout in key data order. When correcting errors listed on the error printout, the parcel identifier is used to locate the particular parcel or sheet within a batch which is in error.

"ERRORS AND COMMENTS"

This is a group of text that:

1) Identifies the error level Terminal (T), Error (E), or Warning (W).
2) Identifies the RDCF item number in which an error was detected.
3) Provides a message indicating what the error is. Each of the error levels are discussed below.

ERROR LEVELS

An error level letter is printed to the right of the ACT (Action Code) number on the "Parcel Entry Edit Errors and Comments." Any one of three letters will be printed: T, E, or W.

T

A T-level or "Terminal" error indicates that a parcel cannot be properly identified because of an error in the parcel identifier, total sheets, or action code. If one of these items is in error, the system would be unable to reference the parcel at a future date. Therefore, processing for that parcel after edit messages have been generated is terminated. All T-level errors must be corrected. Since the parcel was not placed on the master file, the parcel must be resubmitted with an Action Code = 2 (Add). No worksheets, cost comp or parcel totals will be printed for parcels with T-level errors.

E

An E-level error (E means "error") indicates that an item other than parcel identifier, total sheets, or action code, contains unacceptable data. The parcel will either be placed on the master file as is, or the system will make assumptions to correct the invalid information. All E-level errors should be corrected if the assumptions made are incorrect. The data collector is responsible for verifying the information. Since the parcel was placed on the master file, the item should be corrected and the parcel resubmitted as an item update utilizing the Residential Item Update Form (RIUF) Action Code = 4. If the assumption made is correct, no further action on your part is required. All E-level errors must be corrected (assuming no assumption was made or the assumption was invalid), if an accurate replacement cost for the improvements on the parcel is to be calculated.

W

A W-level or "Warning" message indicates that a less critical item was found to be enumerated or key punched in error and an assumption has been made by the edit program to give this item a reasonable (most common) value. If the assumption made by the edit program is correct no further action on your part is required. If this assumption is not acceptable, the parcel must be corrected by utilizing a Residential Item Update Form with an Action Code = 4 (update).

ITEM NUMBER

For each error found in a parcel, the number of the item which is in error is printed to the right of the error level. This item number refers to the number printed on the left side of each article on the RDCF.

ERROR MESSAGES

Under the heading "Errors and Comments" an error message is printed. Normally, there will be one error message for each item number listed. Generally the error messages are self explanatory, however, if you should need additional information a detailed explanation is provided for each error message under the Item Number Section in this manual.

RESIDENTIAL PARCEL ENTRY

There are two computer programs that are used to process all RDCF information that is received in Helena. The first program called the "entry" program checks for errors that will affect the whole batch (i.e. wrong county number

(Item 101)). "Entry" is generally responsible for gluing the parcel transactions together and preparing the parcel for the "Edit" program. Each RDCF is broken down into 8 sub-records or transactions to enable the data to be punched into computer readible formats. Entry mates the 8 sub-records back together to make a complete RDCF.

The second program, called "edit", checks the coded value for each item on the RDCF and ensures it's validity. Errors are detected and printed in this program. The program is designed to ensure that only valid data is allowed on the master file.

PARCEL ENTRY ERROR MESSAGES

Even though a parcel is listed as having a T-level error on the error report, all error checking (entry and edit, E-level and W-level) takes place for that parcel. All listed errors must be corrected before resubmission of a RDCF.

Error Message: T *** - BATCH NO. NOT = CONTROL

Cause:
1) Data Entry (Keypunch) error
2) Batches were mixed together

Action: Resubmit parcel with Action Code unchanged. Call Helena and inform them that you received this message.

Description: The control batch code is keypunched in the first two positions of each Residential Data Collection Form by the data entry operators. The computer checks each parcel to make sure the batch is equal to the control batch code number given to the edit program. Each batch must be processed individually.

Error Message: T 101 -INVALID COUNTY

Cause:
1) Coding error
2) County from another area submitted in the batch
3) Possible data entry error.

Action: Correct the County Number or pull the parcel from the batch and resubmit if the parcel was processed in the wrong area.

Description: The system allows for several counties to be processed in one batch as long as they are from the same area. If a county from another area is encountered it is immediately rejected as an invalid county. Check to see if you coded Item 101 county correctly. If it appears correct on the RDCF3 but the Edit error messages have listed the county as another number it is possible that the county was punched incorrectly. Check to make sure that your coding was readible or the possibility that data entry shifted one position to the right and punched the first character of the assigned township number as the second character of the county number.

Error Message: T 110 - INVALID ACTION CODE

Cause: An action code not equal to 1, 2, 3, or 4 has been encountered.

Action: Check the action code to see if it is in error. If it is, correct the error and resubmit the parcel or update.

Description: Either you have coded the action code incorrectly or a data entry error has been made. In either case any errors should be corrected and the parcel or update must be reprocessed.

Error Message T *** - SEARCHING FOR SUBRECORD 1 - PREVIOUS IDENTIFIER PRINTED

Cause: Data entry error

Action: Resubmit the parcel which is filed (in geocode order) previous to the parcel which this error message appeared on. Do not change the Action Code.

Description: The first part of this message (SEARCHING FOR SUB 1) means that the first of the eight subrecords or parts of the data collection form (i.e. 100, 200, 300, etc. series) could not be found. The computer will continue to search the subrecords until it finds a first subrecord. Normally, when an error is detected on a parcel, the parcel identifier is printed from the first subrecord. In this case, however, the computer cannot print the parcel identifier because there is no subrecord 1. Therefore, the parcel identifier for the previous parcel is printed (PREVIOUS IDENTIFIER PRINTED). The parcels are keypunched, as they are filed, in geocode sort order. Locate the parcel in geocode order, which is listed on the error printout. Then select the parcel after the parcel listed on the error printout and resubmit it with other corrections for the batch.

Error message: T 002 THRU 007 - SEQUENCE ERROR - THIS PARCEL NOT PROCESSED

Cause: Data entry error

Action: Resubmit parcel with Action Code unchanged.

Description: When the RDCF are keypunched, each form is divided into eight subrecords (i.e. 100, 200, 300, etc. series). For each RDCF-3 the eight subrecords must be keypunched in ascending order from one to eight. This error indicates that one or more of the eight subrecords is missing or out of sequence.

Error Message: T *** - TAPE AT END BEFORE 7TH RECORD

Cause: Processing error

Action: Resubmit parcel with Action Code unchanged. Notify the Helena Office that this error occurred, it may indicate a serious system malfunction.

Description: This error is related to the "SEQUENCE ERROR" message. When the computer was reading the parcel transaction tape, the computer reached the end of the tape before all subrecords (i.e. 100, 200, 300, etc. series) for the last RDCF-3 were read.

Error Message: W *** - PARCEL TO BE DELETED

Cause: Submission of RDCF or RIUF with Action Code = 1 to Data Entry for Processing

Description: Parcel has passed fundamental entry checks necessary for parcel deletion to occur.

Error Message: W *** - PARCEL TO BE ADDED

Cause: Submission of RDCF with Action Code = 2 to Data Entry for Processing

Description: Parcel has passed fundamental entry checks necessary for parcel addition to occur.

Error Message: W *** - PARCEL TO BE REPLACED

Cause: Submission of RDCF with Action Code = 3 to Data Entry for Processing

Description: Parcel has passed fundamental entry checks necessary for parcel replacement to occur.

Error Message: W *** - PARCEL TO BE UPDATED

Cause: Submission of RIUF with Action Code = 4 to Data Entry for Processing

Description: Parcel update has passed fundamental entry checks necessary for parcel item up-date to occur.

Error Message: T *** - T LEVEL ERROR FOUND, PARCEL NOT PROCESSED

Cause:
1. Batches incorrectly entered
2. Coding error
3. Possible Data Error

Action: Correct the terminal error listed and resubmit the parcel Action Code = 2.

Description: An error has been encountered in the key data of the parcel Item Numbers 101-110. Either you have left something blank or coded an item out of range. Identify the problem and resubmit the parcel with your next batch of RDCF/RIUF.

PART III

GENERAL PARCEL EDIT

ERROR MESSAGES

STATE OF MONTANA DEPARTMENT OF REVENUE

RESIDENTIAL/COMMERCIAL PROPERTY BUREAU

EDIT ERRORS AND COMMENTS

*** PARCEL EDIT STATISTICS ***

SHEETS SUBMITTED :	7
SHEETS NOT ACCEPTED :	1
SHEETS ACCEPTED :	3
SHEETS ACCEPTED WITH ERRORS :	2
SHEETS ACCEPTED WITH NO ERRORS :	1
SHEETS DELETED :	1

CONTROLS...BATCH ZX AREA 09

CNTY	TWP	SECT	QTR	BLK	LOT	UNIT	SHEET	ACT	ERRORS AND COMMENTS
5	2881	15	1	34	1	TEST	1	2	W 205-INVALID NOT FOUND ON MUNICIPALITY FILE
									W 214-POSSIBLE MULTIPLE OWNERS INDICATED IN 107
									W 302-NOT NUMERIC, ZEROS ASSUMED
									W 303-NOT NUMERIC, ZEROES ASSUMED
									W 304-NOT NUMERIC, ZEROES ASSUMED
									W 305-NOT NUMERIC, ZEROES ASSUMED
									W 306-NOT NUMERIC, ZEROES ASSUMED
									W 308-NOT NUMERIC, ZEROES ASSUMED
									W 401-CANNOT BE < 50 OR > 125
									W 552-CANNOT BE < ITEM 550, 550 ASSUMED
									W 716-INVALID PROPERTY CLASS CODE;2201 ASSUMED
									E 719-MUST BE CODED WHEN YEAR NEW CONST IS CODED
									W ***-PARCEL ADDED WITH ERRORS
5	2881	15	1	34	1	TEST	1	3	T 110-PARCEL NOT ON FILE; CANNOT DELETE, REPLACE, OR UPDATE
5	2881	15	1	34	13	13	12	1	W ***-SHEET DELETED
5	2881	15	1	34	18	24	1	4	W 211-TO BE UPDATED
									W 537-TO BE UPDATED
									W 539-TO BE UPDATED
									W 556-TO BE UPDATED
									E 201-PARCEL NOT FOUND ON MUNICIPALITY FILE
									W 205-INVALID NOT FOUND ON MUNICIPALITY FILE
									W 214-POSSIBLE MULTIPLE OWNERS INDICATED IN 107
									E 508-CANNOT = ZEROS WHEN PERCENT COMPLETE = 100%
									W 537-GREATER THAN 2
									E 719-MUST BE CODED WHEN YEAR NEW CONST IS CODED
									W ***-PARCEL UPDATED WITH ERRORS

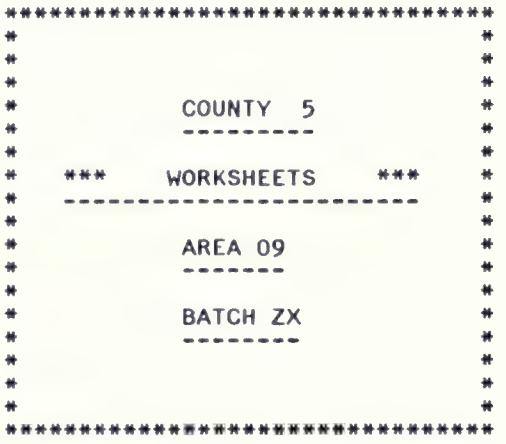
*** FOR UPDATE PROCEDURES, REFER TO THE DATA COLLECTION MANUAL
*** PROPERTY ASSESSMENT DIVISION ***

*** PARCEL EDIT STATISTICS ***

SHEETS SUBMITTED :	7
SHEETS NOT ACCEPTED :	1
SHEETS ACCEPTED :	3
SHEETS ACCEPTED WITH ERRORS :	2
SHEETS ACCEPTED WITH NO ERRORS :	1
SHEETS DELETED :	1

RESIDENTIAL/COMMERCIAL PROPERTY BUREAU

WORKSHEETS


COUNTY 5
*** WORKSHEETS ***
AREA 09
BATCH ZX

RECORD KEY 0528811513401TEST01

COUNTY 05 TOWNSHIP 2881 SECTION 15 QUARTER 1 BLOCK 34 LOT 01 UNIT TEST SHEET 01

>>>>>>>>>>>|KEY DATA|<<<<<<<<<<<	
101 COUNTY	05
102 TOWNSHIP	2881
103 SECTION	15
104 QUARTER SECTION	1
105 QUARTER SECTION BLOCK	34
106 QUARTER SECTION LOT	01
107 UNIT NUMBER	TEST
108 SHEET	1
109 TOTAL SHEETS	9
>>>>>|IDENTIFICATION DATA|<<<<<<	
201 MUNIC|PALITY	HLN
202 ADDITION	ACS
203 ADDITION BLOCK	001
204 ADDITION LOT	634
205 LEVY DISTRICT	0502
206 OWNERSHIP TYPE	
207 PROPERTY TYPE	RES
208 PROPERTY STREET NO,	00426
209 PROP. STREET NAME	N WASHINGTON
210 PROP. ZIP CODE	59601- 0
211 SHORT LEGAL DESCRIPTION	MONTANA APPRAISAL MANUAL TEST ADD
212 ASSESSORS CODE	17AB300
213 MAP CODE	1713-4B-A93
214 PERCENT OWNERSHIP	100.00%
215 OWNER LAST NAME	CLOTH
216 OWNER 1ST NM TERRY	
217 SECOND OWNERS INITIALS	T
218 OWNER ADDRESS LINE 1	9031 E JEFFERSON
219 OWNER ADDRESS LINE 2	PORTLAND
220 OWNER ADDRESS LINE 3	OREGON
221 OWNER ZIP CODE	20917

>>>>>>>>>>>|LAND DATA|<<<<<<<<<<<	
301 UNIT OF MEASURE	SF
302 WIDTH	0
303 F F DEPTH	0
304 F F BACKLOT SETBACK	0
305 F F TRIANGULAR FACTOR	0
306 F F STAN. DEPTH	0
307 SQ.FT AREA	3000
308 ACRE AREA	0.000
309 UNIT VALUE	$43.72
310 SITE VALUE	$0
311 STREET SURFACE	PAVED
312 WATER SOURCE	COMMUNITY
313 SEWER	SEPTIC
314 VIEW LOT	AVERAGE
315 ZONING	SINGLE-FAM
316 BUILDING CODE RESTRICTIONS	ADEQUATE
317 NEIGH PREDOM USE	SINGLE
318 NEIGH TREND	STABLE
>>>>>>|TOTAL PROPERTY DATA|<<<<<	
401 LOCAL INDEX	000
402 PRINCIPAL BUILDINGS	1
403 CONFORMANCE TO NEIGHBORHOOD	TYPICAL
>>>>>>>>>|BUILDING DATA|<<<<<<<<	
501 STRUCTURE CODE	SFR
502 YEAR BUILT	1954
503 WORKMANSHIP	TYPICAL
504 CONDITION	GOOD
505 QUALITY GRADE	5
506 GRADE VARIATION	7 %
507 EFFECTIVE AGE	25 YEARS
508 PHYSICAL DEPRECIATION	0%
509 FUNCT. OBSOLESCENCE	10%
510 ECONOMIC OBSOLESCENCE	5%
511 PERCENT COMPLETE	100%
512 STORIES	1.0
513 FOUNDATION	CEMENT
514 WALL CONSTRUCTION	FRAME
515 EXTERIOR FINISH	ALUM

516 ROOF TYPE	GABLE
517 ROOF MATERIAL	COMP-ROLL
518 EXT. BRICK/STONE AREA	0
519 SOLAR COLLECTOR AREA	0
520 BASEMENT AREA	0
521 FINISHED BSMT AREA	0
522 FINISHED BASEMENT QUALITY GRADE DIFF	0 %
523 DAYLIGHT BASEMENT	NO
524 HEATING SOURCE	ELECTRIC
525 HEATING SYS	ELE-BASEBOARD
526 CENTRAL AIR COOLING	NO
527 ADEQUATE ELECTRICITY	YES
528 LIVING ROOMS	1
529 DINING ROOMS	1
530 FAMILY/DEN/REC ROOMS	0
531 BEDROOMS	2
532 KITCHENS	1
533 BUILT-INS	2
534 FULL BATHS	1
535 HALF BATHS	0
536 HOT WATER HEATER	1
537 KITCHEN SINKS	1
538 OTHER SINGLE FIXTURES	2
539 UTILITY TYPE ROOMS	0
540 MOBILE HOME WIDTH	0
541 FIRST FLOOR AREA	1900
542 UPPER FLOOR AREA	0
543 UNFINISHED FLOOR AREA	0
544 HALF STORY AREA	0
545 UNFIN. 1/2 STRY AREA	0
546 ATTIC AREA	1800
547 FINISHED ATTIC AREA	0
548 FINISHED ATTIC QUALITY GRADE DIFF	0 %
549 HEATED AREA	1900
550 FIREPLACE CHIMNEYS	1
551 TOTAL CHIMNEY HEIGHTS	1.0
552 FIREPLACE OPENINGS	1
553 PREFAB FIREPLACES/STOVES	1
554 ENCLOSED PORCH AREA	250
555 OPEN PORCH AREA	0
556 DECK/PATIO AREA	375

557 BASEMENT GARAGE AREA	0
558 ATTACHED GARAGE AREA	0
559 ATTACHED CARPORT AREA	500
560 FLAT ADD COSTS	$59,000
>>>>>>>>>|ACCESSORY DATA|<<<<<<<<	
601 BUILDING TYPE	NONE
602 STORIES	0.0
603 WALL CONSTRUCTION	NONE
604 GROUND AREA	0000
605 FINISHED AREA	0
606 FLAT ADD COSTS	$0
607 QUALITY GRADE	0
608 EFFECTIVE AGE	0 YEARS
609 FLAT VALUE	$0
610 POOL TYPE	NONE
611 POOL AREA	0000
612 QUALITY GRADE	0
613 EFFECTIVE AGE	0 YEARS
614 FLAT VALUE	$0
615 CONCRETE AREA	0
616 FLAT VALUE	$0
617 ASPHALT AREA	0
618 FLAT VALUE	$0
619 OTHER ACCESSORY FLAT ADD VALUES	$0
>>>>>>>>>>>|STAFF DATA|<<<<<<<<<<	
701 COST BASE YEAR	01/82
702 CONTINUED REVIEW NEEDED	NONE
*** DATA SOURCE: PROP RECORD CARD	
707 ENUMERATED BY	00105
708 ENUMERATED ON	11/82
709 IMPS. APPRAISED BY	00439
710 IMPS. APPRAISED ON	10/82
711 LAND APPRAISED BY	00439
712 LAND APPRAISED ON	10/82
713 1ST PREV AP LAND VL	$45000
714 1ST PREV AP IMP VAL	$0
715 1ST PREV AP VAL DATE	11/78
716 PROP. CLASS CODE LAND	2201
717 PROP. CLASS CODE IMP.	3501
718 YEAR OF NEW CONSTRUCTION	82
719 AP VALUE NEW CONST	$0

COUNTY 5
*** COST/72 SHEETS ***
AREA 09
BATCH ZX

RECORD KEY 05288115134O1TEST01

COUNTY 05 TOWNSHIP 2881 SECTION 15 QUARTER 1 BLOCK 34 LOT 01 UNIT TEST SHEET 01

------- LAND --------APPRAISED 10/82	AREA	U-PRICE	VALUE	TOTAL
SF	3000	43.72	131,160	
APPRAISED VALUE				131,160

------- RESIDENCE, GRADE SFR F5 +7 %	AREA	RATE	GRADE VAR	COST	TOTAL
FIRST STORY	1900	13.09	1.07	26,612	
HEATING, ELECT EBB	1900	0.61	1.07	1,240	
PLUMBING, ADD OR DEDUCT		374	1.07	400	
FIREPLACES, ADD		1658	1.07	1,774	
BUILTINS, ADD		400	1.07	428	
DECKS/PATIOS,	375	2.95	1.07	1,184	
ENCLOSED PORCHES,	250	5.95	1.07	1,592	
ATTACHED CARPORTS,	500	1.90	1.07	950	
FLAT ADD				59,000	
REPLACEMENT COST NEW					93,180
PHYSICAL VALUE AFTER DEPRECIATION OF		31%			64,294
FUNCTIONAL VALUE AFTER OBSOLESCENCE OF		10%			57,865
ECONOMIC VALUE AFTER OBSOLESCENCE OF		5%			54,972
APPRAISED VALUE					54,972

------- SUMMARY OF VALUE	APPRAISED	TAXABLE
TOTAL IMPROVEMENTS	$54,972	$4,700
TOTAL LAND	$131,160	$11,214
TOTAL PROPERTY	$186,132	$15,914

RECORD KEY 00000000000000000000

COUNTY 00 TOWNSHIP 0000 SECTION 00 QUARTER 0 BLOCK 00 LOT 00 UNIT 0000 SHEET 00

COUNTY 5

*** COST/82 SHEETS ***

AREA 09

BATCH ZX

RECORD KEY 0528811513401TEST01

COUNTY 05 TOWNSHIP 2881 SECTION 15 QUARTER 1 BLOCK 34 LOT 01 UNIT TEST SHEET 01

------- LAND ------- APPRAISED 10/82

	AREA	U-PRICE	VALUE	TOTAL
SF	3,000	43.72	131,160	
APPRAISED VALUE				131,160

------- RESIDENCE, GRADE SFR 1F-5 +07 %

	QUANTITY	RATE	GRADE VAR	COST	TOTAL
FIRST STORY FRAME	1,900	28.93	1.07	58,815	
HEATING, ELECT ELEC BB	1,900	+0.61	1.07	+1,240	
PLUMBING	+3	309	1.07	+992	
FIREPLACES STACK CHARGE	1	1,236	1.07	1,323	
STOVE/PREFAB FIREPLACE CHARGE	1	800	1.07	856	
BUILTINS	2	282	1.07	603	
ENCLOSED PORCHES	250	14.47	1.07	3,871	
DECKS/PATIOS	375	5.79	1.07	2,323	
ATTACHED CARPORT COST	500	4.43	1.07	2,370	
FLAT ADD				59,000	
REPLACEMENT COST NEW					131,393
PHYSICAL VALUE AFTER 25 YEARS EFF AGE		33%			88,033
FUNCTIONAL VALUE AFTER OBSOLESCENCE OF		10%			79,230
ECONOMIC VALUE AFTER OBSOLESCENCE OF		5%			75,269
APPRAISED VALUE					75,269

------- SUMMARY OF VALUE

	APPRAISED	TAXABLE
TOTAL LAND	$131,160	$11,214
TOTAL IMPROVEMENTS	$75,269	$6,435
TOTAL SHEET	$206,429	$17,649

RECORD KEY 00000000000000000000
COUNTY 00 TOWNSHIP 0000 SECTION 00 QUARTER 0 BLOCK 00 LOT 00 UNIT 0000

COUNTY 5

*** PARCEL TOTAL ***
*** SHEETS ***

AREA 09

BATCH ZX

RECORD KEY 0528811513401TEST01

COUNTY 05 TOWNSHIP 2881 SECTION 15 QUARTER 1 BLOCK 34 LOT 01 UNIT TEST

SHEET NUMBER(S) INCLUDED IN PARCEL TOTAL 1

---- PARCEL TOTAL OF 1 SHEET(S) ----------

	APPRAISED	TAXABLE
TOTAL LAND	$131,160	$11,214
TOTAL IMPROVEMENTS	$75,269	$6,435
TOTAL PARCEL	$206,429	$17,649

PART III

GENERAL PARCEL EDIT

ERROR MESSAGES

RESIDENTIAL PARCEL EDIT

The parcel edit program checks each item on the RDCF from Item 101 through Item 719. If the data coded for any item does not meet the edit criteria an error message is generated.

The error messages that follow are printed without an item number, hence the message refers to the entire parcel, not a particular item. Error messages that refer to a specific item are listed on the page that deals with that item.

GENERAL RESIDENTIAL PARCEL EDIT ERROR MESSAGES

Error Message: T - 110 PARCEL IS ON FILE --- CANNOT BE ADDED

Cause: The key data of the parcel that you are attempting to add is already on file

Action: Resubmit the parcel with action code 3 "Replace" or correct the key data (block & lot) and resubmit the parcel with action code 2 "Add"

Description: All parcel I.D's must be unique on the master file. You have attempted to add a parcel with an I.D. number that has already been used. Several causes for this error are possible:

1. You have already added this parcel and are attempting to add a duplicate parcel.

2. You have made an error in your key data coding and have used the same parcel I.D. for two separate parcels(non unique).

3. You were attempting to replace, delete, or update a parcel and used the wrong action code (2) Add rather than (3) Replace, (4) update, or (1) Delete.

4. Check to see that the key data was punched correctly.

5. You were attempting to split a parcel and had processed a delete on the parcel in a previous batch. The delete was not processed or was processed against the wrong parcel. Now you have attempted to add the new information but because the delete didn't process correctly in the previous run your add is rejected as already on file. Check your previous batch error messages and ensure that the delete processed correctly. If not resubmit the delete and add in a future batch.

Error Message: T SHEET DELETED: CANNOT UPDATE, REPLACE OR ADD IN SAME BATCH

Cause: The sheet has been deleted, no data is left to access, the sheet no longer exists

Action: Resubmit the parcel, Action Code = 2.

Description: The sheet/parcel that you are trying to add, update, or replace was deleted in this same batch. Since the sheet/parcel was already deleted you cannot update, replace or add the sheet/parcel. If you wanted to re-add the parcel under the same key data you should not use the delete but should use the "replace" function Action Code = 3. If you were trying to update the parcel, only an Item Update Form was necessary to update and the delete was not necessary. No adds should have been processed since the replace function should be used rather than a delete and add sequence.

Error Message: T 110 PARCEL NOT ON FILE; CANNOT DELETE, REPLACE OR UPDATE

Cause: The parcel key data did not match any key data on the master file

Action: Check your key data for accuracy - the parcel you are attempting to access does not exist with the key data that you are using.

Description: One of several situations is possible:

1) The parcel was never added 2) Your key data is inaccurate, either punched or coded incorrectly 3) The parcel was already deleted in a previous processing run 4) The parcel was originally added under the wrong key data

Error Message: T *** PARCEL CONTAINS TERMINAL ERRORS - NOT PROCESSED

Cause: Item(s) in your key data are invalid

Action: Check your key data and resubmit the parcel

Description: You have attempted to process a parcel and an Item(s) in your key data is invalid. Check your key data, correct the error and resubmit the parcel.

Error Message: W *** PARCEL ADDED

Cause: Informational

Action: None, You completed the parcel correctly

Description: This message indicates that the parcel has been added to the master file.

Error Message: W *** PARCEL ADDED WITH ERRORS

Cause: Informational

Action: Thoroughly review the parcel error messages and worksheet(s) The parcel has been added to the master file but errors were detected that you should review. Item update action code 4 to correct any errors.

Description: The parcel has been added to the master file but not all Items were correctly completed or found to be consistent with other items. The errors should be closely reviewed to ensure accuracy. Assumptions were made (see specific error message) or zeroes were coded to get the parcel on the master file and provide you with a worksheet. The errors that were found may seriously effect the value that is computed for the parcel. Only the Appraiser can determine the seriousness of the errors. CHECK THE PARCEL THOROUGHLY!!!

Error Message: W *** PARCEL REPLACED

Cause: Informational

Action: None

Description: You have replaced a parcel on the master file with new information. The old information is no longer available. The new parcel information that resides on the master file was obtained from the RDCF that you submitted with action code 3. No original information is retained in a replace situation. For example, if Land Data information was coded on the original parcel and you left the new "Replace" parcel land data section blank the master file will now show that the land data is blank (or no land exists). If you want only some of the existing data updated for a parcel on the master file you should use action code 4 and a Residential Item Update Form.

Error Message: W *** PARCEL REPLACED WITH ERRORS

Cause: The "edit" program encountered incorrectly coded items on your Replace RDCF

Action: Check your error messages and worksheet thoroughly. Item update action code = 4 if necessary

Description: All parcels and transactions being added to the master file must be checked for errors. You have coded an RDCF and indicate the you want to replace the data currently on the master file. The Replace has occurred but errors were detected in the coding you did on the replace RDCF. Check your errors/warnings and worksheets to ensure that no incorrect assumptions were made. If E level errors were found correct the errors with an Item Update Form (RIUF) action code = 4.

Error Message: W *** PARCEL UPDATED

Cause: Informational

Action: None

Description: You have submitted an item Update Form (RIUF) action code = 4 and have succeeded in doing so without errors. You should however, check the worksheet to ensure that the Item updates that you processed were what you really intended and that the values are correct. It is fairly easy to include too many zeroes (or not enough) and update the master file with a value that may be accepted by "Edit" but may not be an accurate value. Check your work!! The system cannot tell you whether 003000 or 000300 is the correct value to be updated, since there is no way to know which is accurate.

Error Message: W *** PARCEL UPDATED WITH ERRORS

Cause: The "Edit" program found errors in your coding when it attempted to process your update

Action: Check your error messages/updates and resubmit an item update form to correct them if necessary.

Description: All transactions are checked for accuracy before they are processed against the master file. You have made some errors or have blanked some items. In order for the parcel to be complete, accurate and accurately cost the parcel you must correct your errors (warnings excepted). BE CAREFUL when coding RIUF forms. Always use leading and trailing zeroes to ensure Accuracy!!

Error Message: T *** ITEM NUMBER TO BE UPDATED BLANK OR NOT NUMERIC

Cause: Invalid item number coded on item update form

Action: Check your item update form and error messages - resubmit the transaction, action code = 4

Description: When you coded your item update form you left the item number blank or coded it incorrectly. Or possibly the item number was punched incorrectly. Check the item number involved and resubmit that transaction. Remember each line on an item update form is handled individually so you don't have to submit the whole update form again. Correct the incorrect line on a new update form and resubmit the new form.

Error Message: T *** CANNOT UPDATE ITEM NUMBERS 101-108, UPDATE NOT PROCESSED

Cause: You attempted to Item update the key data, that's not allowed

Action: Delete the parcel and resubmit the parcel with the new key data action code = 2. These transactions can be processed in the same batch since the key data is different.

Description: It is impossible to change the key data of a parcel using an item update form. If you want to change the key data of a parcel you will have to delete the parcel using the old parcel key data, then resubmit the parcel as an add with the new key data. This may require you to adjust your mapping in that parcel location. Check your mapping.

Error Message: T 200 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number that you are trying to update does not exist.

Action: Check your item update form and error messages. Resubmit the "Item" update transaction action code 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Identification Data Section. The problem is the item number that you have specified does not exist. You may have coded a 200 or 222 or greater. Check to see what item you wanted coded and correct the item number. It is possible that the Item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T 300 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number that you are trying to update does not exist

Action: Check your item update form and error messages. Resubmit the "Item" update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Land Data Section. The problem is the item number that you have specified does not exist. You may have coded a 300, or 319 or greater. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T 400 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number you are trying to update does not exist

Action: Check your item update form and error messages. Resubmit the item update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Total Property Data section. The problem is the item number that you have specified does not exist. You may have coded a "400" or "404" or greater. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T 500 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number that you are trying to update does not exist.

Action: Check your item update form and error messages. Resubmit the item update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Building Data Section. The problem is the item number that you have specified does not exist. You may have coded a "500 or "561" or greater. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T 600 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number that you are trying to update does not exist

Action: Check your item update form and error messages. Resubmit the item update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Accessory Data section. The problem is the item number that you have specified does not exist. You may have coded a "600" or "620" or greater. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T *** ITEM NUMBER GREATER THAN 719 - UPDATE NOT PROCESSED

Cause: The item number that you are trying to update does not exist. The RDCF ends at item 719

Action: Check your item update form and error messages. Resubmit the item update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Staff Data section. The problem is the item number that you have specified does not exist. You have coded a number greater than 719. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T 700 - ITEM NUMBER FOR UPDATE NOT FOUND

Cause: The item number that you are trying to update does not exist

Action: Check your item update form and error messages. Resubmit the item update transaction, action code = 4 after you have corrected the problem.

Description: You have attempted to item update an item from the Staff Data section. The problem is the item number that you have specified does not exist. You have coded a "700" or 720 or greater. Check to see what item number you wanted coded and correct the item number. It is possible that the item number was punched incorrectly. DO NOT submit the total item update form again. You need only correct and resubmit the line(s) that is in error.

Error Message: T - DUPLICATE PARCEL -- NOT PROCESSED

Cause: Two duplicate parcels same processing run

Action: None - If the parcels are true duplicates otherwise change the key data of the rejected parcel and resubmit.

Description: Two parcels with the same key data were submitted in a batch. The first parcel will build on to the master file. The second parcel will be rejected as a duplicate. You should check to ensure that the parcels were actually duplicates and not key data coding problems. It is possible that two parcels were coded with the same key data by mistake. In this case you should resumbit the parcel that was rejected with the correct key data. If the parcels were actually duplicates then no action is necessary. ***Note*** When this message is printed on the Edit Program both records are displayed but only 1 key data line is displayed. The error messages for both parcels will follow the key data line. The second set of error messages apply to the rejected parcel.

Error Message: T *** CANNOT BE DELETED AND ADDED UNDER SAME PARCEL IDENTIFIER

Cause: An attempt has been made to delete and add a parcel in the same batch

Action: Resubmit the parcel that was rejected in the entry edit program. Generally this will be the add.

Description: It is not possible to delete and add a parcel in the same processing run. If you have attempted to delete and add a parcel the delete processed and the add was rejected. The proper procedure for deleting and adding a parcel is the Replace procedure, where you code an action code 3 on the RDCF. If you had coded up an RDCF with the proper information and an action code = to 3 "Replace" no delete would have been necessary and the parcel characteristics would have been replaced. Since you attempted to delete and add the parcel in the same run you can no longer use the replace function; the delete processed and the parcel is no longer on file. Your next step is to add the parcel action code = 2 in your next batch of RDCF. If your intention is to split a parcel and change the key data on a parcel already on file you must send in a delete in one batch to delete the parcel and then resubmit the parcel action code = 2 in the next or a future batch. Another option is to use replace on the old key data and add a new parcel key at the end of a block.

KEY DATA ITEMS

PART IV

101.1

COUNTY

Source: County auto license plate number

Required: For all parcels

Data type: Numeric - leading zeroes required

For the purpose of the computer assisted appraisal system, each county is identified by the number currently being used on the automobile license plates. Counties have been assigned numbers from 01 to 56. (See Table 1). That portion of Yellowstone National Park which is located in Montana, but is not within any county, has been arbitrarily assigned the number 57.

For example, the county license plate number of Lewis and Clark County is 5. (Each single digit number is always prefixed with a leading zero.) Enter 05 in County (item 101) for all properties within Lewis and Clark County.

A. Parcel Filing Sequence

The two digit County number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the County number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records parcel information should be filed in Parcel Identification Number sequence.

B. Errors for Item 101 county are detailed in the Entry Program:
See Page II-6.

TABLE 1

COUNTY AUTOMOBILE LICENSE PLATE NUMBERS

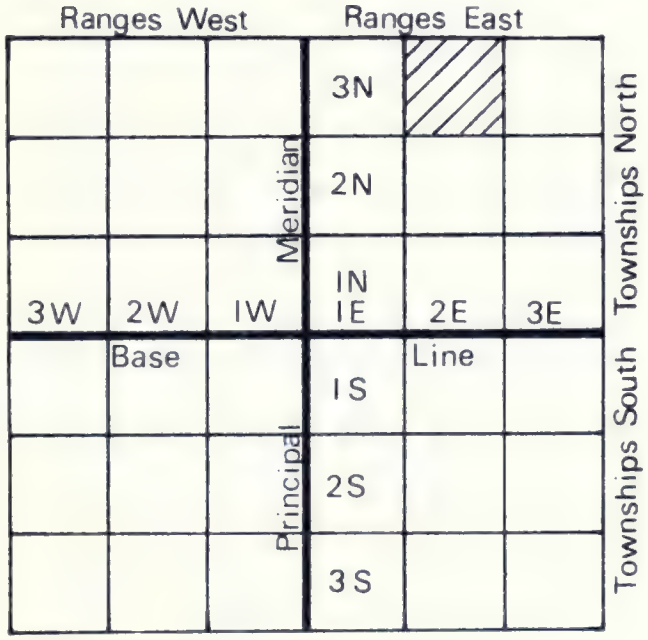
COUNTY	NO.	COUNTY	NO.	COUNTY	NO.
Beaverhead	18	Judith Basin	36	Rosebud	29
Big Horn	22	Lake	15	Sanders	35
Blaine	24	Lewis and Clark	05	Sheridan	34
Broadwater	43	Liberty	48	Silver Bow	01
Carbon	10	Lincoln	56	Stillwater	32
Carter	42	Madison	25	Sweetgrass	40
Cascade	02	McCone	41	Teton	31
Chouteau	19	Meagher	47	Toole	21
Custer	14	Mineral	54	Treasure	33
Dawson	16	Missoula	04	Valley	20
Deer Lodge	30	Musselshell	23	Wheatland	44
Fallon	39	Park	49	Wibaux	52
Fergus	08	Petroleum	55	Yellowstone	03
Flathead	07	Phillips	11	Yellowstone National Park	57
Gallatin	06	Pondera	26		
Garfield	50	Powder River	09		
Glacier	38	Powell	28		
Golden Valley	53	Prairie	45		
Granite	46	Ravalli	13		
Hill	12	Richland	27		
Jefferson	51	Roosevelt	17		

Source: Property Record Card, Tax Roll, Map

Required: For all parcels

Data type: Numeric - leading zeroes required

Townships are a part of the federal rectangular survey system, which is a land identification system. Under this system, land is divided into townships 6 miles square, which are related to base lines established by the federal government. The base line running north and south is known as the 'Principal Meridian' while the east and west base line is simply called the 'Base Line'. The township numbers east or west of the 'Principal Meridian' are designated as ranges whereas the numbers north and south of the 'Base line' are tiers.



For example, the description of a township as 'Township 3 North, Range 2 East' would mean that the township is situated 3 tiers north of the 'Base Line', and 2 ranges east of the 'Principal Meridian'. (See Figure 1).

Figure 1

A. Assigned Township Numbers

Just as unique numbers have been assigned to counties so it has been necessary to assign a unique number to each township or portion of a township that lies within any county in the state. This has been done for two purposes. One is to shorten the number of characters required to identify the township and second to provide a basis for a computer audit of the legal description carried on each property.

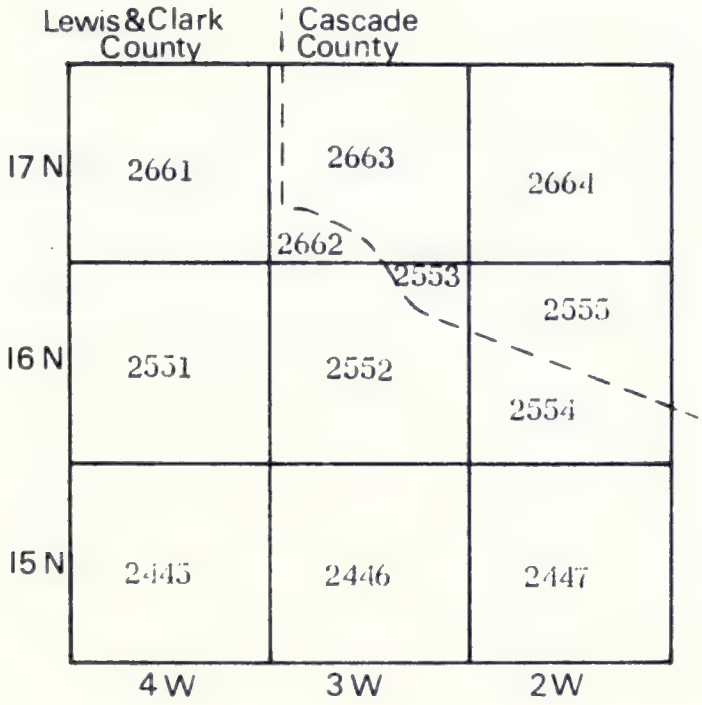
A list of each township designation in Montana together with the assigned township number and the assigned number for the county in which the township is located will be found in the Master List of Assigned Township Numbers.

1. Numbering Townships

Townships have been arbitrarily numbered starting with the most westerly township or part of a township in the most southerly tier of townships. This most southwestern township in the state was numbered '0001'. The next easterly township (or part of one) on the same tier of townships was numbered '0002'. The next easterly township was numbered '0003'. This process was continued until each township or portion of a township in the most southerly tier was consecutively numbered from west to east.

Then this process was continued on the next most southerly tier of townships and each next most southerly tier of townships until all the townships or parts of townships in each county in the state were numbered.

2. Townships Split by County Lines



When a county line bisects a township each portion of the township in a different county was assigned a separate number. (See Figure 2).

Figure 2

B. Parcel Filing Sequence

The four digit township number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the township number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records parcel information should be filed in Parcel Identification Number Sequence.

C. Error Printout Explanation:

Error Message: T 102-INVALID TOWNSHIP

Cause: The township code is equal to zero or is not numeric

Action: Resubmit the parcel with the correct Township Code

Description: An invalid township code has been coded or punched in the assigned township field. Either a blank, zero filled or non-numeric character was punched or coded in Item 102. The parcel was not added to the master file. Valid values vary depending on what county the parcel is in - check your assigned township number listing. Obtain the correct assigned township number for the township and range in your county and resubmit the parcel action code = 2.

Source: Property record card; reconciled ownership map

Required: For all parcels

Data type: Numeric - leading zeroes requried

A township is six miles square or 36 square miles. Each square mile is designated as a Section which is equivalent to 640 square acres. Sections within a township are numbered from the northeast corner, following a back and forth course, until the last section in the southeast corner is reached. For purposes of land description, sections are commonly divided into half sections containing 320 acres, quarter sections containing 160 acres, etc.. Land acreage descriptions are then made by referring to a particular quarter of a particular section located within a particular township, county and state.

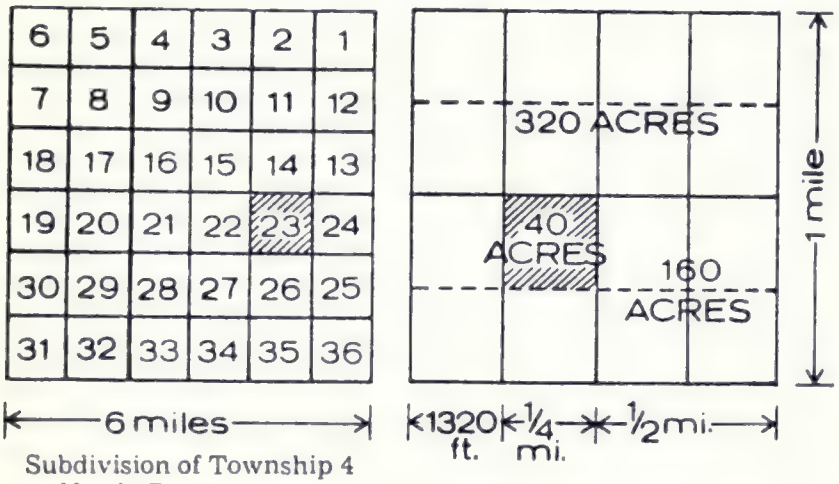

6 5 4 3 2 1
7 8 9 10 11 12
18 17 16 15 14 13
19 20 21 22 23 24
30 29 28 27 26 25
31 32 33 34 35 36
6 miles
320 ACRES
40 ACRES
160 ACRES
1 mile
1320 ft.
¼ mi.
½ mi.
Subdivision of Township 4 North, Range 4 East.
Subdivision of Section 23.

Figure 1

Figure 1 illustrates the preceding paragraph. The 'shaded' portion of the subdivision of a section, being a part of Section 23 (shaded), located in Township 4N and Range 4E (shaded), would be legally described as thus: NE4 of the SW4 of Section 23, Township (or tier) 4N, Range 4E of the Montana Principal Meridian, County of Gallatin, State of Montana.

Because of the curvature of the earth, the north/south lines of ranges converge as they extend toward the north pole. To keep the range lines as nearly six miles apart as possible, the lines are laid out for approximately 24 miles, and then jog so that they are again six miles apart to preserve as nearly as may be the square shape of the townships. The irregular shaped areas created in the correction are usually along the north and west sides of a township and are referred to as lots (Government Lots) and are approximately forty acres in size.

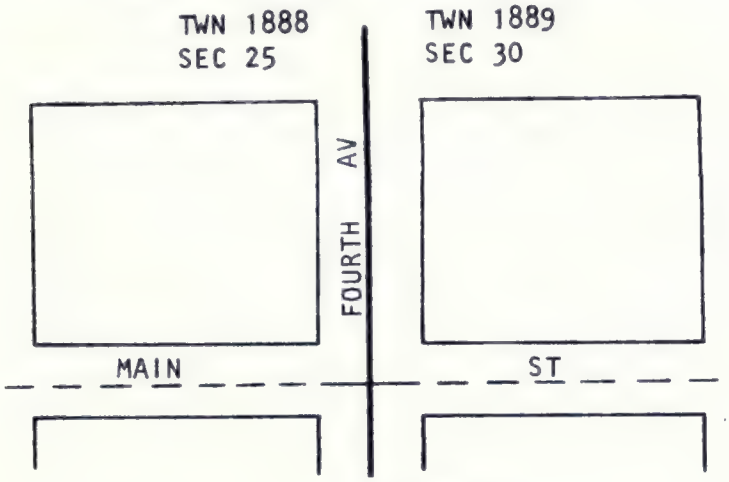
A. Color Coding

In order to help clarify features and boundaries on a reconciled ownership map (tax map) a color code scheme has been developed. Those features and/ or boundaries that are unclear and need to be accented should be colored, otherwise they may be identified in "pencil graphite". A complete discussion of the color code may be found under Quarter Section Block (Item 105).

1. Section lines are Quarter Section Block boundaries and are identified in RED.

2. Clearly identify the section numbers on both sides of a section line. If the section line is also a township line identify the townships and sections on both sides of the section line. (See Figure 2).

3. On township or section maps the section lines need not be delineated in red unless a partial section map is divided by section lines.



Clearly identify township and section numbers on both sides of a section line.

Figure 2

B. Parcel Filing Sequence

The two digit section number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the section number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records parcel information should be filed in Parcel Identification Number sequence.

C. Error Printout Explanation:

Error Message: T 103 INVALID SECTION

Cause: The Section Code is equal to zeroes, is not numeric, or is greater than 36.

Action: Resubmit the parcel with the correct Section number. Correct values are from 01 to 36.

Description: An invalid Section number has been coded or punched in the Section number field. You have coded a 00, left the section blank, coded a value greater than 36, or coded a non-numeric value. The parcel was not added to the master file. Resubmit the parcel action code = 2 with the correct section number. Valid section number values range from 01 to 36.

QUARTER SECTION

Source: Property record card; reconciled ownership map

Required: For all parcels

Data type: Coded

The Quarter Section assigned to a Quarter Section Lot (parcel) is the Quarter Section in which the Quarter Section Block is numbered. Quarter Sections are numbered counter-clockwise as follows: NE = 1, NW = 2, SW = 3, SE = 4. (See Figure 1).

Figure 1

NW=2	NE=1
SW=3	SE=4

Section 5

The Quarter Section, Block, and Lot sequence is a filing number designed to facilitate administrative record keeping and aid in field appraisal work, particularly in densely populated areas with a large number of parcels per section. These numbers are arbitrarily assigned and may or may not have any relationship to block or lot numbers used in a legal location within a section.

The Quarter Section number is placed in a 35° ellipse preceeding the Quarter Section Block number. (See Figure 2). They are separated by a hyphen and the ellipse is placed within the Quarter Section to which the block is assigned. This is a direct aid on each map to help locate a parcel by its Parcel Identification Number.

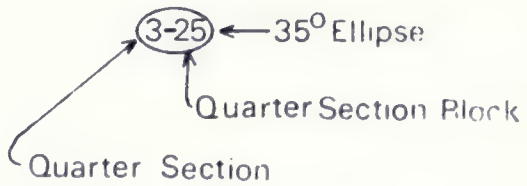
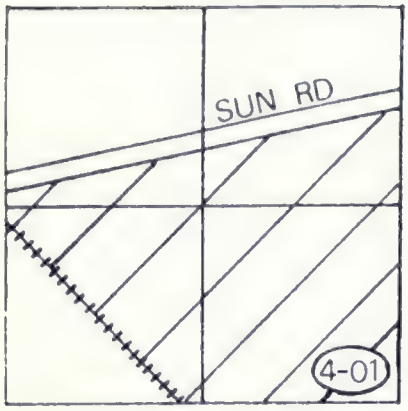


Figure 2

A. Assignment of Quarter Section

The following rules are to be used to determine what Quarter Section a Quarter Section Block is numbered in after the block boundaries are delineated.

Figure 3



Section 10

Rule 1

A Quarter Section Block that is partly in two or more Quarter Sections, will be numbered in the Quarter Section where the majority of the block lies. (See Figure 3).

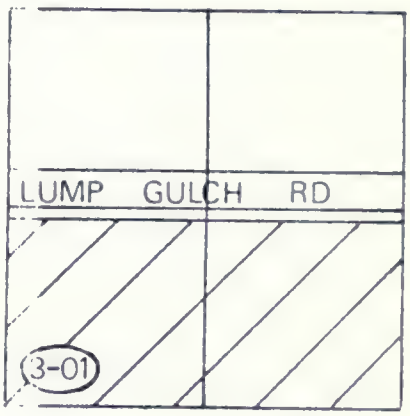
104 Quarter Section: 1=NE 2=NW 3=SW 4=SE
105 Quarter Section Block
106 Quarter Section Lot

Rule 2

A Quarter Section Block that is equally in two or more Quarter Sections, will be numbered in the lowest numbered Quarter Section. (See Figure 4).

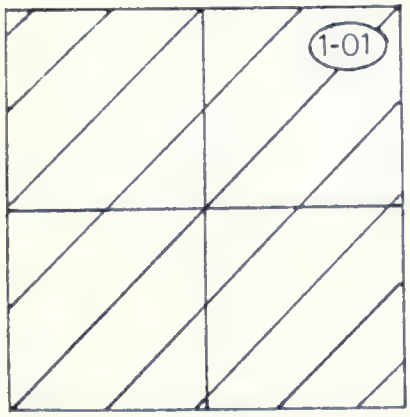
104 Quarter Section: 1=NE 2=NW 3=SW 4=SE
105 Quarter Section Block
106 Quarer Section Lot

Figure 4



Section 4

Figure 5



Section 3

Rule 3

A Quarter Section Block that occupies an entire section will be numbered in Quarter Section 1. (See Figure 5).

104 Quarter Section: 1=NE 2=NW 3=SW 4=SE
105 Quarter Section Block
106 Quarter Section Lot

B. Color Coding

In order to help clarify features and boundaries on a reconciled ownership map (tax map) a color code scheme has been developed. Those features and/or boundaries that are unclear and need to be accented should be colored, otherwise they may be identified in "pencil graphite". A complete discussion of the color code may be found under Quarter Section Block (Item 105).

C. Parcel Filing Sequence

The one digit Quarter Section number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the Quarter Section number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records, parcel information should be filed in Parcel Identification Number Sequence.

D. Error Printout Explanation

1. Error Message: T 104-QUARTER SECTION NOT NUMERIC

   Cause: A non-numeric character has been entered into the Quarter Section Field

   Action: Correct the Quarter Section and resubmit the parcel Action Code = 2

   Description: An invalid Quarter section number has been coded or punched in the Quarter Section field. The field is not numeric. The parcel has not been added to the master file. Correct the error and resubmit the parcel action code = 2. Valid values range from 1 to 4.

2. Error Message: T 104-QUARTER SECTION OUT OF RANGE

   Cause: A value less than 1 or greater than 4 has been entered in the Quarter Section field

   Action: Correct the Quarter Section and resubmit the parcel action code = 2

   Description: An invalid Quarter Section number has been entered in the Quarter Section field. This value is less than 1 or greater than 4. The parcel has not been added to the master file. Correct the error and resubmit the parcel action code = 2. Valid values range from 1 to 4.

QUARTER SECTION BLOCK

Source: Reconciled ownership map

Required: For all parcels

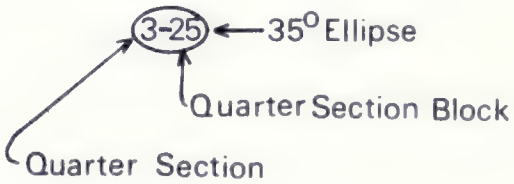
Data Type: Numeric - leading zeroes required

A Quarter Section Block is an area bounded on all sides by physical features or by boundaries which must be retained for taxing purposes. In either case, all features used as Quarter Section Block boundaries must be shown on all maps.

The Quarter Section, Block and Lot sequence is a filing number designed to facilitate administrative record keeping and aid in field appraisal work, particularly in densely populated areas with a large number of parcels per section. These numbers are arbitrarily assigned and may or may not have any relationship to block or lot numbers used in a legal description. They may not even be an indication of a parcel's location within a section.

The Quarter Section Block number is placed in a 35° ellipse after the Quarter Section number (See Figure 1). They are separated by a hyphen and the ellipse is placed within the Quarter Section to which the block is assigned. This is a direct aid on each map to help locate a parcel by its Parcel Filing Sequence number.

Figure 1



A. Quarter Section Block Boundaries

1. The following features must be used as block boundaries.

   a. State and County boundaries

   b. Section lines

   c. Streets

   d. Railroad tracks
      NOTE: This does not include spur lines that do not divide private ownership. In railroad yards, only the outermost tracks should be used as block boundaries.

2. The following features may be used to subdivide large, irregularly shaped or complex blocks. The Area Manager should be consulted before using the following for block boundaries.

   a. Streams, rivers (as denoted on the USGS Quadrangle Map Series), and other bodies of water. (Including doubleline drainage)

   b. Private roads that serve two or more residences.

   c. In some situations, 'imaginary' extensions of streets (these are to be indicated on the maps as a series of small dashed lines) may be used. (See Figure 2) However, 'imaginary' extensions may not be used when any one of the features listed above is available.

      If an 'imaginary' extension of a street is to be used, it is subject to the following conditions:

      (1) The extension cannot exceed 300 feet in length.
      (2) The exact location of the beginning point of the extension must be readily identifiable. For example, the extension must never have its beginning point somewhere along a curve of a street. The location of the extension must be clearly visible on the ground.

      (3) Street extensions can never be established where they would split a parcel. (Quarter Section Lot) For example, culdesacs must never be extended, because parcels are frequently located at the end.
      (4) Street extensions must be 'straightline' extensions and must intersect the first visible map feature along the extension.

   d. In areas where extensive use of culdesacs makes street extensions impossible; the parcels on the culdesac (or multiple culdesacs) may be delineated as a Quarter Section Block. (See Figure 3)

3. The following do not in themselves create Quarter Section Block boundaries.

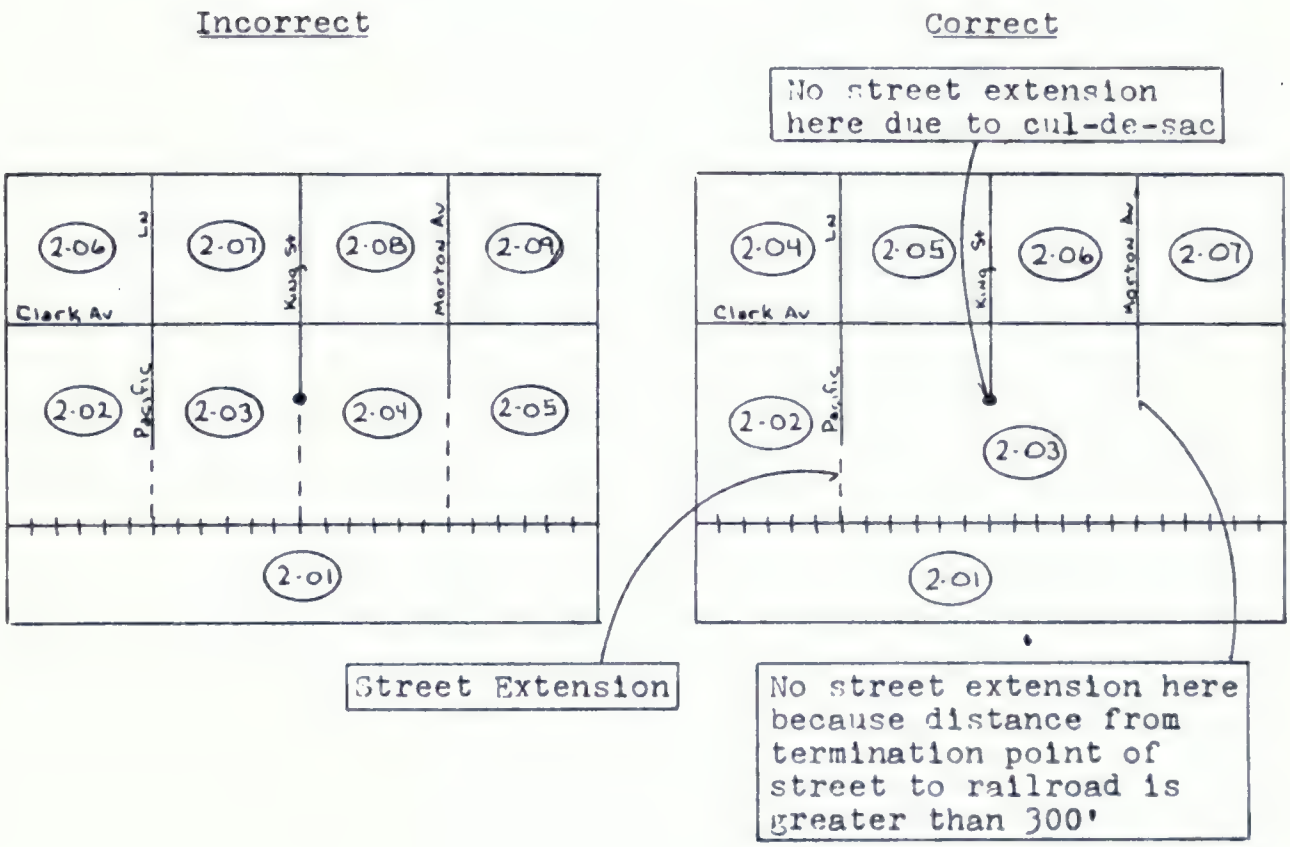
a. Quarter section lines

b. Incorporated city or town limits

c. School district boundaries

d. Addition or Subdivision boundaries

FIGURES 2 and 3



B. Numbering of Quarter Section Blocks

1. Quarter Section Blocks are consecutively numbered from left to right and from south to north within a Quarter Section (See Figure 4). See Quarter Section (Item 104) to determine in which Quarter Section a Quarter Section Block should be numbered.

   NOTE: The use of a section map or city/town map as a control map for Quarter Section Block numbering in urban areas is recommended. The block number can then be transcribed from the control map to the map on which the parcels will be delineated.

2. There are areas where the consecutive numbering of Quarter Section Blocks is not advisable. This is particularly true in developing areas or areas of rapid growth. In those areas and with the counsel of the Area Manager it is permissible to leave spaces in the numbering sequence. When leaving blank numbers in a Quarter Section Block it is advisable to complete an RDCF for the skipped lot. Use Item 211 "Short Legal" to identify that the RDCF is merely a marker in the files to identify that a gap exists in the numbering sequence. Current and future users of your filing system will be far less confused by finding a record of the gap in the filing system instead of a vacant slot. When you do have a reason to add data under that particular key data a replace can be used to add the information.

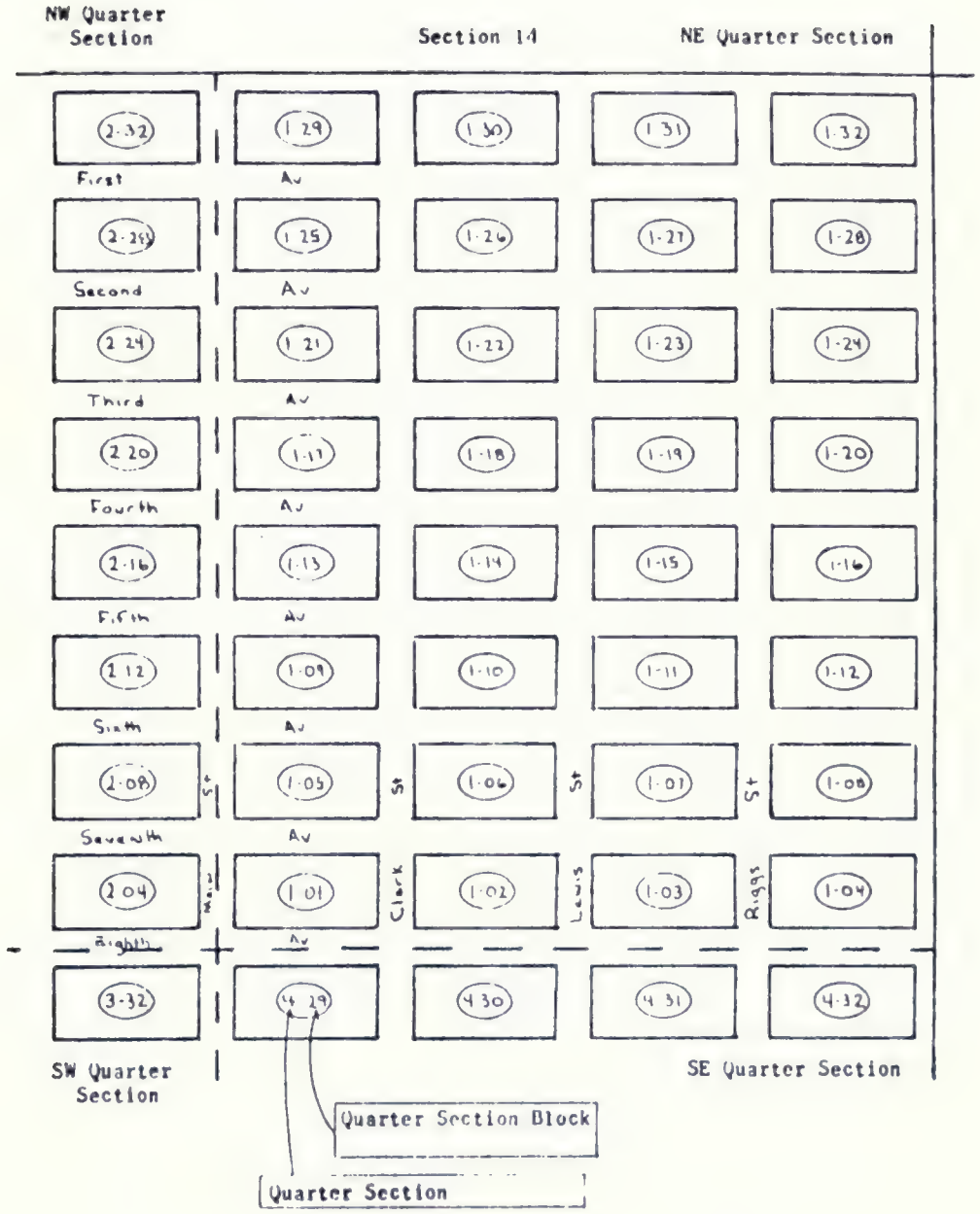

NW Quarter Section
Section 14
NE Quarter Section
2-32
1-29
1-30
1-31
1-32
First Av
2-25
1-25
1-26
1-27
1-28
Second Av
2-24
1-21
1-22
1-23
1-24
Third Av
2-20
1-17
1-18
1-19
1-20
Fourth Av
2-16
1-13
1-14
1-15
1-16
Fifth Av
2-12
1-09
1-10
1-11
1-12
Sixth Av
2-08
1-05
1-06
1-07
1-08
Seventh Av
2-04
1-01
1-02
1-03
1-04
Eighth Av
3-32
4-29
4-30
4-31
4-32
SW Quarter Section
SE Quarter Section
Main St
Clark St
Lewis St
Riggs St
Quarter Section Block
Quarter Section

FIGURE 4

3. If there are any Quarter Section Blocks within a Quarter Section there must be a block number '01'. A Quarter Section Block that occupies the entire section will be numbered block 01 of Quarter Section 1. (See Figure 5)

4. Quarter Section Block numbering CANNOT exceed 99 for one Quarter Section. If the block numbering does exceed 99 consult your Area Manager to help make the necessary corrections. (See unit number-Item 107)

5. When an addition block is in more than one section, a separate Quarter Section Block Number may be assigned to each "piece" of the addition block in each section (See Figure 6). However, it is acceptable practice to "bend" the section line around the entire block or down an alley. Depending on what makes sense for that particular case.

Remember: This system is to aid field review.

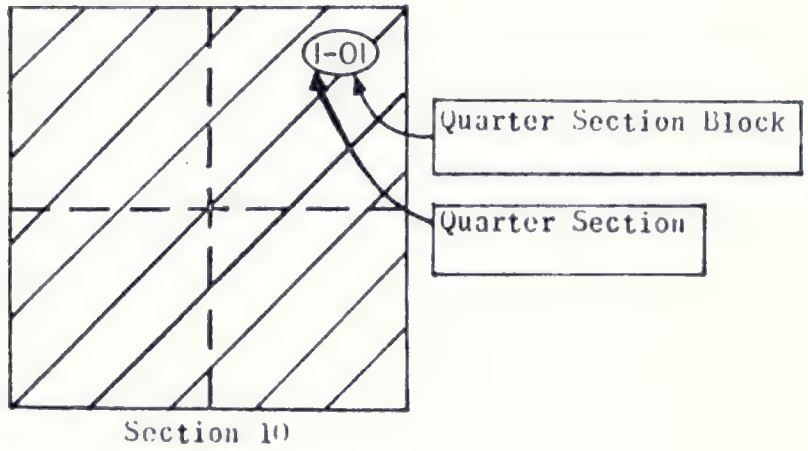


FIGURE 5

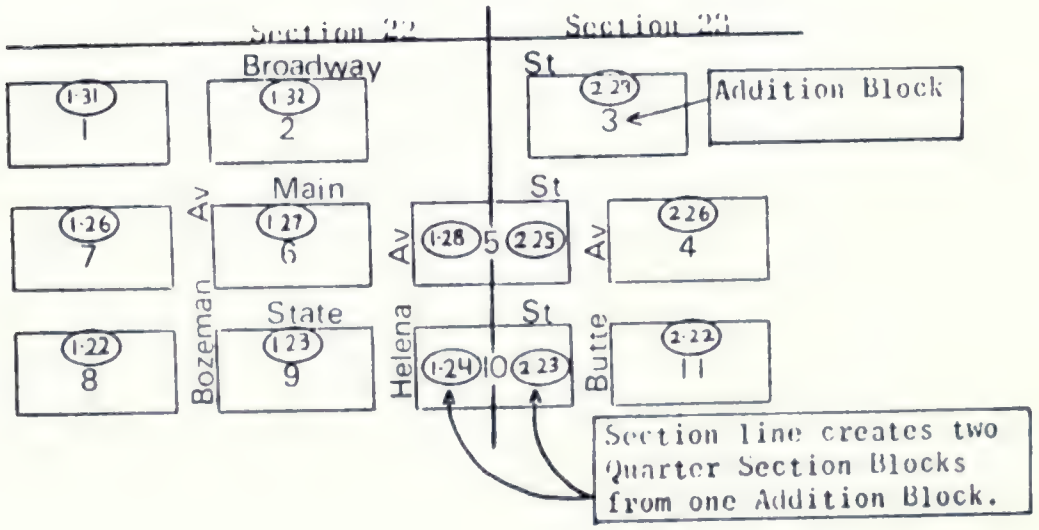
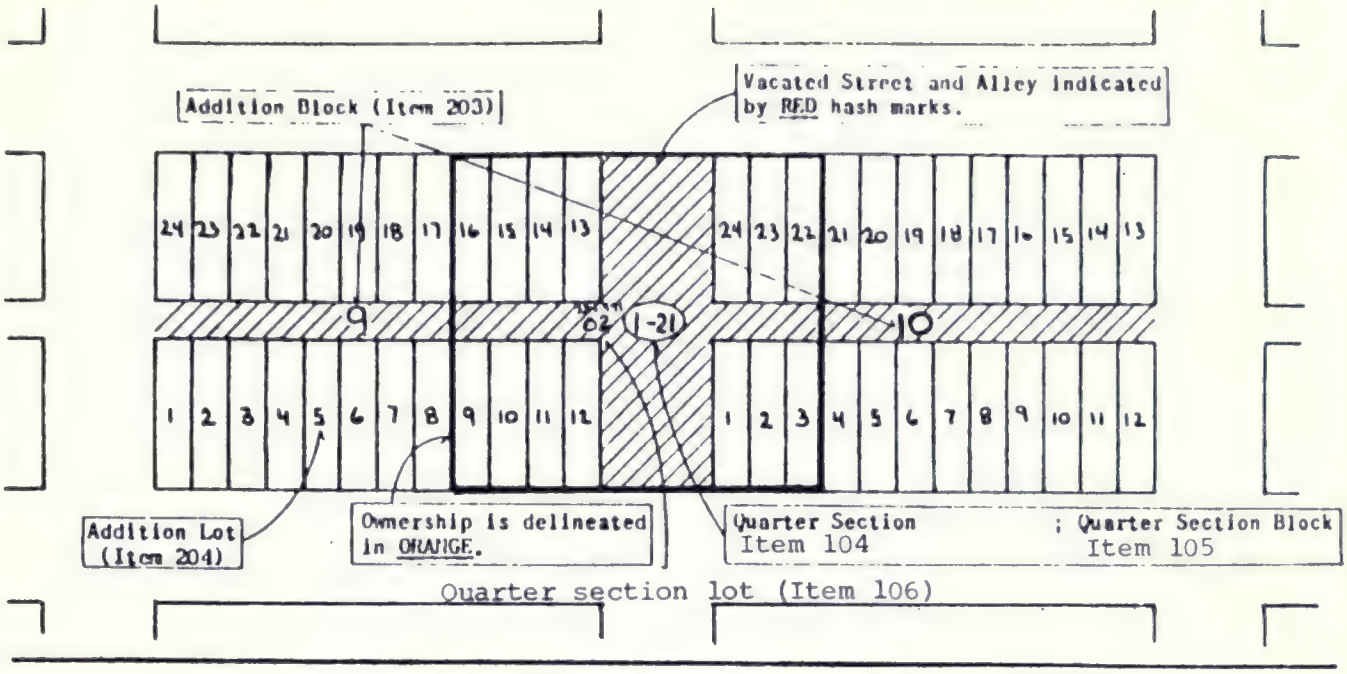


FIGURE 6

6. a. When two or more addition blocks are joined together by vacated streets, one Quarter Section Block number is assigned (See Figure 7).

b. If one person owns both blocks, or contiguous land in both blocks, there must be a trailer sheet to show the second addition block number and its addition lot numbers. Use the short legal description, (Item 211) to further explain that the vacated streets are also included as well as describing a full legal description of blocks and lots involved in the parcel (See Figure 7).


Addition Block (Item 203)
Vacated Street and Alley indicated by RED hash marks.
24 23 22 21 20 19 18 17 16 15 14 13
24 23 22 21 20 19 18 17 16 15 14 13
9
10
02
1-21
1 2 3 4 5 6 7 8 9 10 11 12
1 2 3 4 5 6 7 8 9 10 11 12
Addition Lot (Item 204)
Ownership is delineated in ORANGE.
Quarter Section Item 104
; Quarter Section Block Item 105
Quarter section lot (Item 106)

Main sheet (sheet # 1)

For one parcel, these items must be exactly the same on all sheets.

Trailer sheet (any sheet greater than # 1)

KEY DATA			
		→ 03	1
101	County	# 04	05
102	Township	# 06	1888
103	Section	# 10	30
104	Quarter Section 1 = NE, 2 = NW 3 = SW, 4 = SE	12	1
105	Quarter Section Block	# 13	21
106	Quarter Section Lot	# 15	02
107	Unit Number	# 17	0000
108	Sheet	# 21	01
109	Total Sheets (only code on first sheet)	# 23	02
110	Action Code 1 = Delete 2 = Add 3 = Replace	25	2
IDENTIFICATION DATA			
201	Municipality (if none enter XXX)	26	HLN
202	Addition (if none enter XXX)	29	HLT
203	Addition Block (if none enter 000)	32	009
204	Addition Lot (if none enter 000)	35	009
205	Levy District	38	0488
206	Ownership Type	# 42	00
207	Property Type 1 = Res, 2 = Apt, 3 = Com, 4 = Ind, 5 = Agr, 6 = Other, 9 = Exempt	44	1
208	Property Street Number	# 45	00115
209	Property Street Name	50 / 52 / 55	VICKERS DRIVE
210	Property Zip Code (59_____)	# 70	6001
211	Short Legal Description (if none enter X)	→ 01	2
02			BLK 9 LTS 9-15 BLK 10
23			LTS 1-3, 22-24 AND
44			VACATED STREET AND
65			ALLEYS
86			

Only use Item 211 on trailer sheet → if main sheet is full

KEY DATA			
		→ 03	1
101	County	# 04	05
102	Township	# 06	1888
103	Section	# 10	3
104	Quarter Section 1 = NE, 2 = NW 3 = SW, 4 = SE	12	
105	Quarter Section Block	# 13	21
106	Quarter Section Lot	# 15	02
107	Unit Number	# 17	0000
108	Sheet	# 21	02
109	Total Sheets (only code on first sheet)	# 23	
110	Action Code 1 = Delete 2 = Add 3 = Replace	25	2
IDENTIFICATION DATA			
201	Municipality (if none enter XXX)	26	
202	Addition (if none enter XXX)	29	
203	Addition Block (if none enter 000)	32	
204	Addition Lot (if none enter 000)	35	
205	Levy District	38	
206	Ownership Type	# 42	
207	Property Type 1 = Res, 2 = Apt, 3 = Com, 4 = Ind, 5 = Agr, 6 = Other, 9 = Exempt	44	
208	Property Street Number	# 45	
209	Property Street Name	50 / 52 / 55	
210	Property Zip Code (59_____)	# 70	
211	Short Legal Description (if none enter X)	→ 01	
02			
23			
44			
65			
86			

FIGURE 7

105.7

C. Map Preparation

1. Source Map Hierarchy

All features that are used as Quarter Section Block boundaries must be shown on all maps. The hierarchy of source maps for locating these features is 1) USGS Quadrangle Map Series, 2) General highway maps. 3) Maps from the county appraiser or assessor's office.

2. Labeling Features

All roads, rivers, railroads and other features on maps should be labeled with their commonly used name. It is important that the same name be consistently used for any one feature throughout a county. (See Figure 8)

FIGURE 8

3. Color Code

In order to help clarify features and boundaries on a reconciled ownership map (tax map) a color code scheme has been developed. Those features and/or boundaries that are unclear and need to be accented should be colored, otherwise they may be identified in "pencil graphite". To maintain consistency and uniformity it is important to use the proper colorcoding scheme if "coloring" is needed. The color code stamp illustrated in Figure 9 will appear on the front perimeter of all colored maps.

COLOR CODE

RED	SECTION LINES
RED HASH MARK	VACATED STREETS AND ALLEYS
BLUE	QS LINES
BLUE	RIVERS
PURPLE	ROADS
YELLOW	RAILROADS
GREEN	TAX JURISDICTION BOUNDARIES
ORANGE	PARCEL BOUNDARIES
PINK	BLOCK BOUNDARIES

FIGURE 9

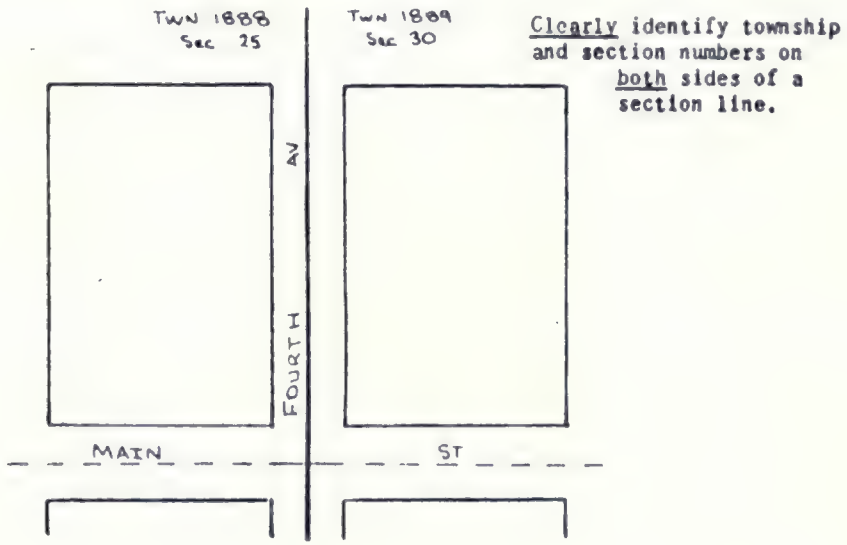
If sufficient room is not available this stamp will appear on the perimeter of the back of the map. Care should be taken never to stamp the color code or make any other unnecessary markings within the dedication or metes and bounds description on a translucent (Mylar) copy of a map because any subsequent copies of the map will have this information blurred and may cause confusion.

a. Section Lines

(1) Section Lines are Quarter Section Block boundaries and are identified in RED.

(2) Clearly identify the section numbers on both sides of a section line. If the section line is also a township line identify the townships and sections on both sides of the section line. (See Figure 10)

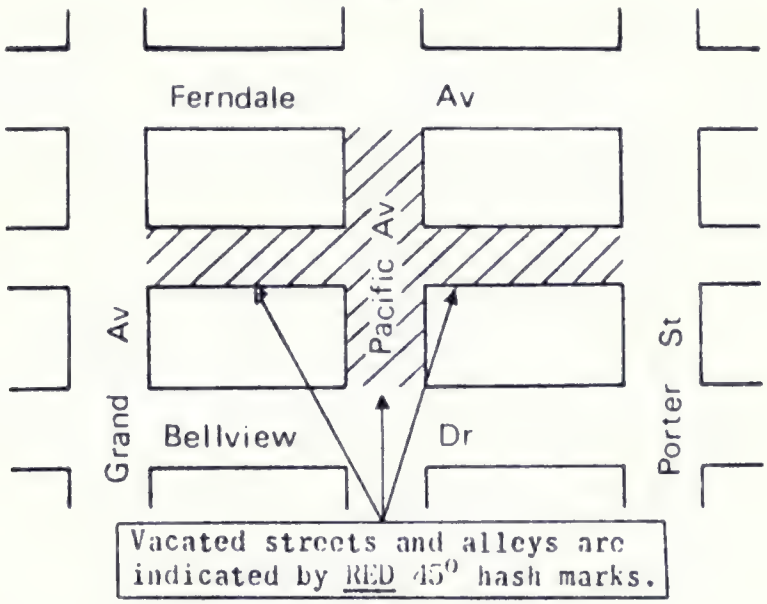
FIGURE 10



b. Vacated Streets and Alleys

Streets or Alleys vacated by action of the County Commissioners or City Council are to be shown by RED hash marks at a 45 degree angle to the street or alley. (See Figure 11)

FIGURE 11



c. Quarter Section Lines

Quarter Section Lines are delineated in BLUE on detail maps (addition, subdivision, certificate of survey, etc.) These lines are determined only from surveyed marks on the maps. Quarter section lines need not be delineated on township or section maps.

d. River, Streams, and Other Bodies of water representing a Quarter Section Block boundary are identified in BLUE (preferably a light blue marker).

e. Roads

Dedicated streets, gravel surfaced roads, and private roads used as a Quarter Section Block boundary are identified in PURPLE.

f. Railroads

Railroads are a Quarter Section Block boundary and are identified in YELLOW. It is not necessary to place cross ties along the length of the track to differentiate a railroad from other map features, the color coding is sufficient.

g. Tax Jurisdiction Boundaries

(1) Taxing jurisdictions are the same as the assessor's levy districts. These can include elementary school districts, high school districts and incorporated cities or towns. Only assessor assigned levy districts will be used as taxing jurisdictions.

(2) Tax jurisdiction boundaries are not Quarter Section Block boundaries.

(3) Tax jurisdiction boundaries are delineated in GREEN. (Preferably green lead)

h. Quarter Section Lot Boundaries

A Quarter Section Lot is also known as a parcel. Quarter Section Lots delineated in ORANGE. (Orange lead)

D. Parcel Filing Sequence

The two digit Quarter Section Block number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the Quarter Section Block number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records, parcel information should be filed in Parcel Identification Number sequence.

E. Error Printout Explanation

1. Error Message: T 105-INVALID QUARTER SECTION BLOCK

Cause: The value entered for Quarter Section block is not numeric or equals zeroes.

Action: Correct the Quarter Section block and resubmit the parcel action code = 2.

Description: An invalid Quarter Section Block number has been entered in the Quarter Section block field. This value is not numeric or is equal to zero. The parcel has not been added to the master file. Correct the error and resubmit the parcel action code = 2. Valid values range from 01 to 99.

QUARTER SECTION LOT

Source: Reconciled ownership map

Required: For all parcels

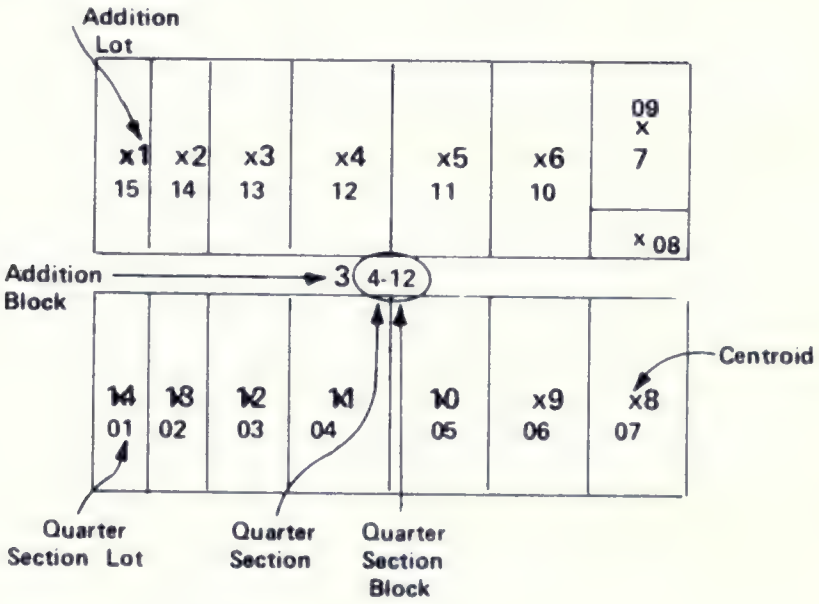
Data Type: Numeric, leading zeros required

A Quarter Section Lot (also known as a parcel) is a contiguous area of land described in a single description in a deed or as one of a number of lots on a plat; separately owned, either publicly or privately; and capable of being separately conveyed. The only exceptions to this definition are "lots" formed by the bisection of a single ownership, by a section line or a taxing jurisdiction such as an incorporated city, town or a school district.

The Quarter Section, Block and Lot sequence is a filing number designed to facilitate administrative record keeping and aid in field appraisal work, particularly in densely populated areas with a large number of parcels per section. These numbers are arbitrarily assigned and may or may not have any relationship to block or lot numbers used in a legal description. They may not even be an indication of a parcel's location within a section.

The Quarter Section Lot number is to be placed near the centroid of the parcel. (See Figure 1).

FIGURE 1



A. Quarter Section Lot Boundaries

1. A Quarter Section Lot is a contiguous ownership. A lot may also be divided by the following features:

   a. Quarter Section Block boundaries. (See item 105).
   b. Dedicated alleys
   c. Taxing jurisdictions

d) Incorporated city or town limits
e) School district boundaries

2. A Quarter Section Lot may also be created to uniquely code ownerships as need be listed on the assessment (tax) roll. The Area Manager must approve all such lots and care should be taken to properly document them.

3. A section line (a Quarter Section Block boundary) DOES NOT break a platted lot or tract in a dedicated addition or subdivision.

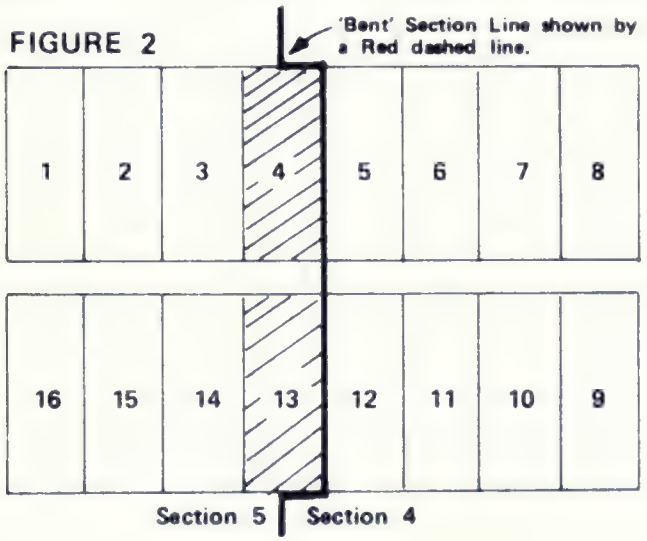
a. The section line must be "bent" around the lot (or tract) so that the lot (or tract) is coded in the section where the majority of the lot (or tract) lies. (See Figure 2).

b. The "bent" section line will be shown by a RED DASHED line. Both the actual section line and the "bent" section line are to be indicated on the map.

c. The "bending" of the section line should be done to minimize confusion in the field. It is acceptable practice to "bend" the line around an entire platted block or down an alley. Depending on what makes sense for that particular case.

Remember: This system is to aid field review.

FIGURE 2



B. Numbering of Quarter Section Lots

The numbering of Quarter Section Lots should only be done AFTER all land within the Quarter Section Block has been accounted for and each ownership delineated. (In orange if needed).

1. The Quarter Section Lot numbers are assigned independent of the addition lot numbers. Quarter Section Lots reflect ownerships within a block. The typical numbering sequence is counterclockwise around the block. (See Figure 3).

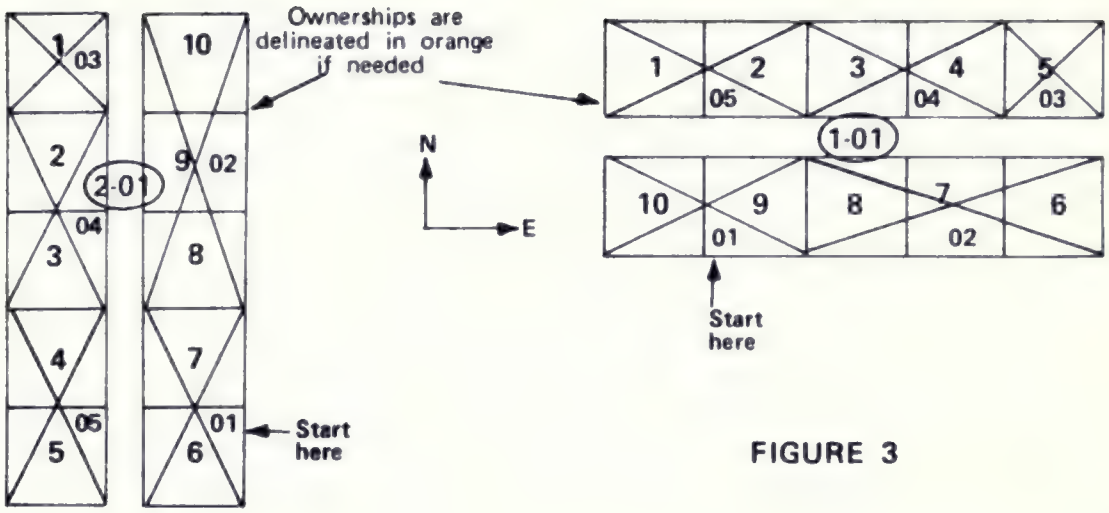

Ownerships are delineated in orange if needed
1
03
2
2-01
04
3
4
05
5
10
9
02
8
7
01
6
Start here
N
E
1
2
05
3
4
04
5
03
1-01
10
9
01
8
7
02
6
Start here

FIGURE 3

2. The Quarter Section Lot sequence is to AID the appraiser in field appraisal work. The lot numbering sequence should be thought of as the order in which one would drive from parcel to parcel. While this might not be possible in all cases it can by used as a rule of thumb. A few examples might help to illustrate this point.

a. Parcels on a cul-de-sac

All parcels fronting on a cul-de-sac should be numbered in sequence, because typically the front of the house faces the cul-de-sac. If a parcel is bounded by both a cul-de-sac and a road, still number the parcel in sequence with the other parcels on the cul-de-sac. (See Figure 4).

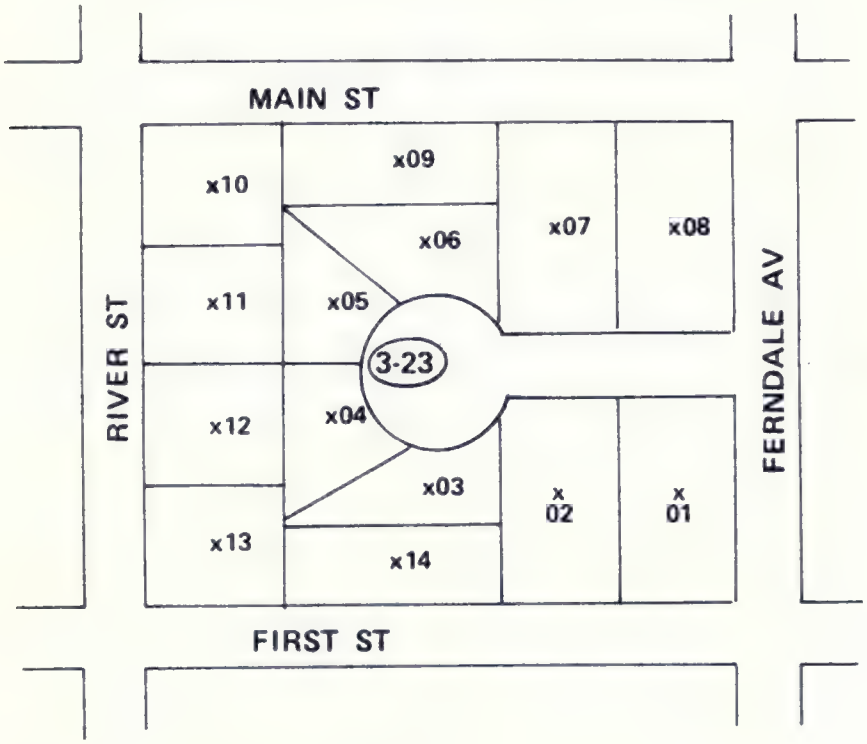


FIGURE 4

b. Parcels on an alley

If a parcel fronts on an alley, number that parcel after the parcel that is in front of it. Frequently a parcel is the back half of several lots and is fronting on the cross street. Again, number that parcel in sequence with the parcel in front of it. (See Figure 5).

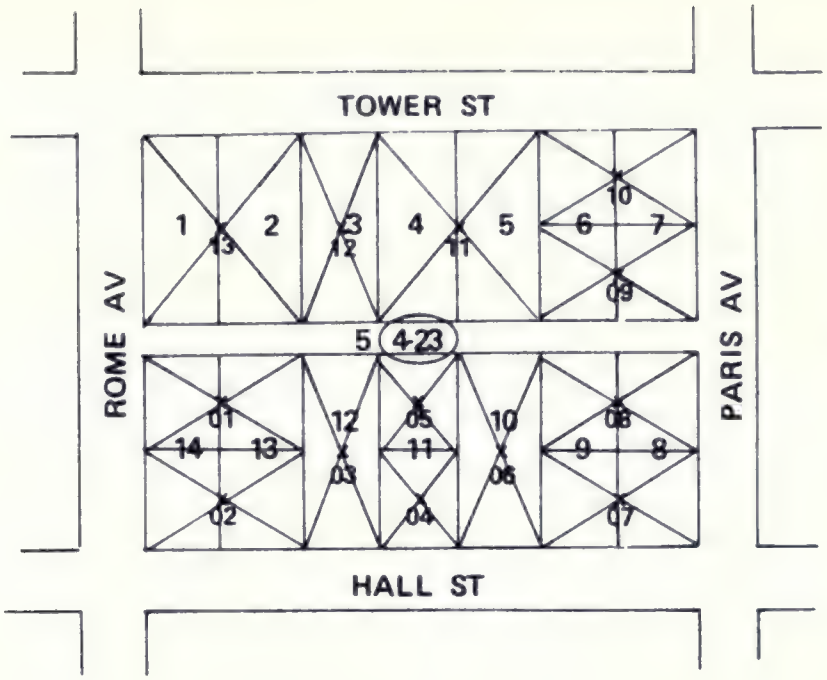
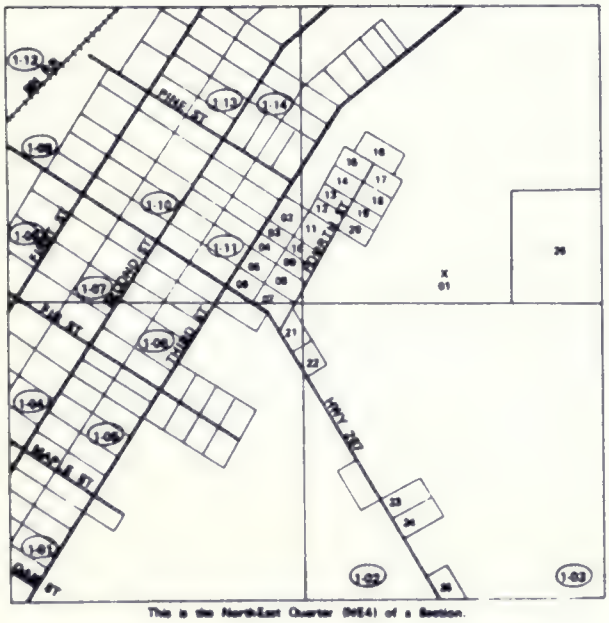


FIGURE 5

c. Parcels in an area of mixed property type

In areas of mixed property types (i.e. residential and agriculture) and or varying sized parcels, Quarter Section Lot number all parcels as if driving from one "front door" to the next. Access to the improvements on the parcel for field appraisal work should be of prime consideration. (See Figure 6).

FIGURE 6



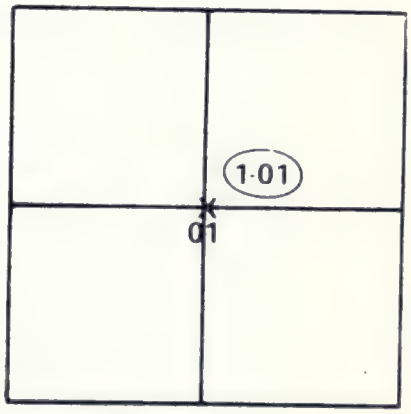


FIGURE 7

3. For every Quarter Section Block there MUST be a Quarter Section Lot 01. A parcel that occupies an entire section must be lot 01. (See Figure 7). There can only be one lot 01 per block.

4. Quarter Section Lot numbering CANNOT exceed 99 for one Quarter Section Block. If the lot numbering does exceed 99 the Area Manager must be consulted to help make the necessary corrections.

5. While it is desirable to consecutively number lots, it may not be prudent to do so. Depending on the locale, the sale activity, etc, consecutively numbering lots may cause more work than is necessary. Individuals aware of the local situation (i.e. appraisers, mapping clerks) should be consulted before lot numbering.

C. Unique Quarter Section Lots

Quarter Section Lots are an identifier of ownership. The following types of ownerships are uniquely coded and are therefore treated separately.

1. Condominiums

Each condominium unit is treated as a lot. The entire condominium complex (as given on the unit declaration or master deed) is assigned one Quarter Section Block number. Individual ownerships within the condominiums complex will also be identified by the unit number. (Item 107).

2. Improvements on leased land

An improvement on leased land is considered to be a Quarter Section Lot separate and distinct from the lot identifying the land. The Quarter Section Lot for the land should be numbered first. Then the lots describing the improvements numbered in a driving order sequence. (See Figure 8).

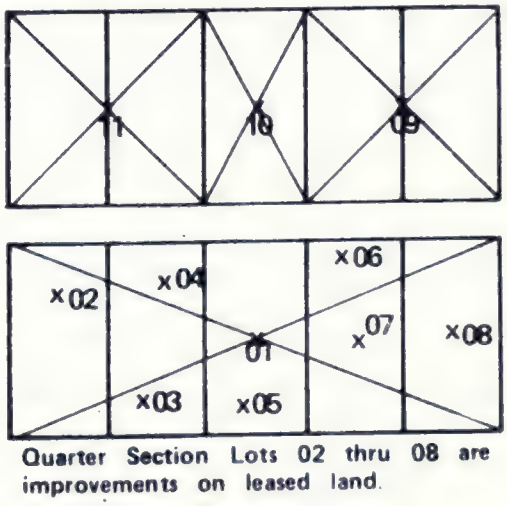


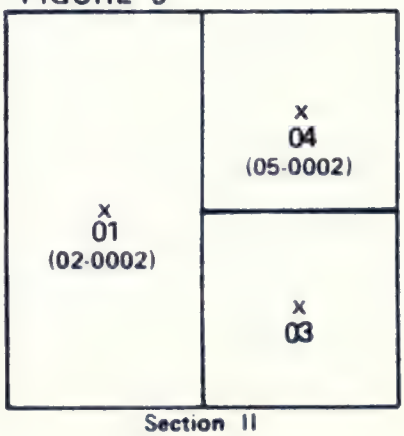
FIGURE 8

Quarter Section Lots 02 thru 08 are improvements on leased land.

3. All Subsurface ownership

Ownership of surface rights should be numbered first, then the subsurface ownership(s) will be numbered. If a subsurface ownership is the same area as the surface ownership, place in parenthesis the subsurface Quarter Section Lot number and Unit Number (Item 107). (See Figure 9).

FIGURE 9



Section 11

D. Color Coding

In order to help clarify features and boundaries on a reconciled ownership map (tax map) a color code scheme has been developed. Those features and/or boundaries that are unclear and need to be accented should be colored, otherwise they may be identified in "pencil graphite". A complete discussion of the color code may be found under Quarter Section Block (Item 105).

E. Parcel Filing Sequence

The two digit Quarter Section Lot number is a part of the Parcel Identification Number which uniquely identifies each parcel. Be sure to write the Quarter Section Lot number, as part of the Parcel Identification Number, on each form that pertains to a parcel (i.e. property record card, etc.).

For ease of filing and location of records, parcel information should be filed in Parcel Identification Number Sequence.

F. Error Printout Explanation

1. Error Message: T 106-INVALID QUARTER SECTION LOT

   Cause: The value entered for Quarter Section Lot is not numeric or equal to zeroes

   Action: Correct the Quarter Section Lot and resubmit the parcel action code = 2

   Description: An invalid Quarter Section Lot number has been entered in the Quarter Section Lot field. This value is not numeric or is equal to zeroes. The parcel has not been added to the master file. Correct the error and resubmit the parcel action code = 2. Valid values range from 01 to 99.

UNIT NUMBER

Source: Data Collector

Required: For all parcels

Data Type: Alphanumeric, leading zeroes required

The Unit Number identifies the property rights associated with each parcel.

Ownership of real property carries with it certain privileges. As a means of illustration, these rights or privileges are referred to as a "Bundle of Rights" and compared to a bundle of sticks. Wherein each stick represents a distinct and separate right or privilege of ownership. These rights are inherent in ownership of real property and guaranteed by law, but subject to certain limitations and restrictions. They are the right to use real property, to sell it, to lease it, to enter it, to give it away, and the right to refuse to exercise any of these rights.*

These rights may be held by different individual owners. For example, one may own the rights to the improvements on a parcel, while another retains ownership of the surface and the remaining rights. This is called a physical partial interest.

A different type of division of rights occurs when one right is owned by several individuals in some proportion. An example of this type of division would be if two individuals own a parcel. One person owns a 1/4 interest and the other owns 3/4 interest. This is referred to as a legal partial interest.

Another way to picture the difference between physical partial interest and legal partial interest is by comparison with a layer cake. Each layer represents a physical partial interest (air rights, surface, improvements on the surface, sub-surface, etc.). Legal partial interest can then be thought of as a slice of the cake. There may be many slices (or ownerships) and some may or may not be larger than others.

Because the division of rights either physically or legally affects value, it is important to identify what rights are associated with each parcel. The Unit Number provides a means to identify the "break-down" of rights for a parcel. If all of the rights to a parcel are held by one individual, Unit Number is coded '0000'.

* American Institute of Real Estate Appraiser, The Appraisal of Real Estate, 7th ed. (Chicago: Author 1978) p 15.

However, if there is either or both physical or legal partial interests in a parcel the first ownership is coded '0001'; the second '0002'; the third ownership '0003'; and so forth until all ownerships are identified and numbered. The rights to each particular ownership are enumerated in detail in Short Legal Description (item 211). If a parcel has any type of partial interest, no ownership should be coded '0000'.

The unit number has a second purpose in the Parcel Identification System. In situations where the standard methods utilized for Parcel Identification are not suitable, the unit number can be utilized to uniquely identify a parcel. Since unit number is an alphanumeric field with four positions the combinations of unique numbers that can be created within a Quarter Section are basically infinite. Assuming that you have more than 99 lots within a Quarter Section block the unit number can be utilized to expand the limits of the key data. An example is shown in Figure 1 Below:

		A	B
101	County	07	07
102	Township	3966	3966
103	Section	07	07
104	Quarter Section	3	3
105	Quarter Section Block	28	28
106	Quarter Section Lot	01-99 Possible	01-99 Possible
107	Unit Number	0000	1000 (M425) (1589)

In order to establish "uniqueness" only 1 digit must change at any position in the key data. Item numbers 101-106 are constrained by fairly rigid usage rules. Unit number in contrast is basically free form. In the example above key data A has 99 Quarter Section Lots possible under standard parcel identification data coding rules. By changing the unit number to any other number or alphabetic characters the quarter section lot can be expanded another 99 positions for each change of the unit number.

Another example might be in the description of mobile home parks. By standardizing the key data for a mobile home park using quarter section block 01 and quarter section lot 01 the unit number can be varied to identify which space the mobile home occupies. Perhaps a unit number series from M001 to M999 might be applicable in situations where the number of mobile homes exceeds 100. In situations where less than 100 mobile homes exist MH01 to MH99 might be applicable.

Caution should be utilized when using the unit number to uniquely identify parcels. Since the field is alphanumeric the results of key data sorts for worksheets, cost comp, valuation rolls etc., are unpredictable and you may split areas when printing out records.

It is advisable that you reserve unit numbers from 0000 to 0999 for the standard "division of rights". All other numbers are free for your use, and are unique within any given quarter section, quarter section lot or quarter section block.

In situations where a subdivision is already mapped by quarter section block or lot in the original plat and that description is not unique to the quarter section the unit number can be utilized to make that coding

unique. Simply assign a unique unit number for each subdivision within the quarter section and use the lot and block numbers as assigned in the original plat.

Another unique numbering system used successfully in areas of the state uses the Section Number Scheme and the Quarter Section Block and Lot or Unit Number to identify the location of farmsteads.

Lets assume (for example purposes) we have a farmstead located in the SW¼ of the SE¼ of Section 26. Since we already identify the SE¼ of Section 26 in Item 104 as a 4 we can then break the SW¼ of Quarter Section 4 into 4 more parts.

2	1
3	4

Example of a Quarter Section Block broken into Quarters.

Using our standard number scheme we then identify the SW¼ of Quarter Section 4 with a "3". Our Geocode could look like this:

County	99	
twp	9999	
Sec	26	
Qtr	4	
Qtrblk	03	Indicates SW¼ of Qtr 4
Qtr Lot	01	

The unit number would be coded 0003 for this parcel if you preferred to use Qtr Blk 01 and Qtr Lot 01.

This system can be utilized down to a parcel the size of 2.5 acres by using the unit number and the existing Quarter Section in Item 104. If Item 104 was coded 3 or SW¼ and the item number were coded 4223 then the parcel would be located in the SE¼NW¼NW¼SW¼ of the section the parcel was located in. See figure 1.

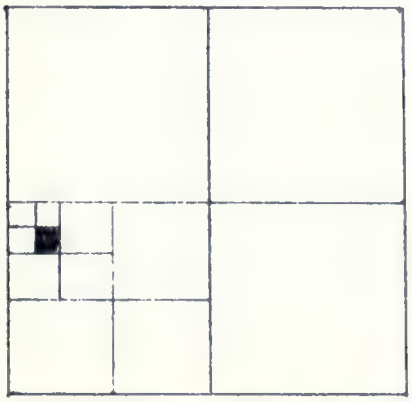


Figure 1

Should you plan to use the unit number to uniquely identify parcels in your county you should contact your Area Manager to inquire about standards in your area.

Error Printout Explanation:

1. Error Message: T 107-UNIT NUMBER BLANK

   Cause: The value entered for unit number is blank

   Action: Correct the unit number and resubmit the parcel Action Code = 2

   Description: A blank unit number value has been entered in the unit number field. The parcel has not been added to the master file. Correct the error and resubmit the parcel, action code = 2. Valid unit numbers range from 0000 to 0999, AAAA-ZZZZ, or any combination of numbers and characters.

Source: Individual coding parcel

Required: For all parcels

Data type: Numeric, leading zeros required

Enter the number of the sheet being filled out. If only one sheet is required for the parcel, enter '01'. There cannot be more than one sheet 01 per parcel. If more than one sheet is required for the parcel, enter '01' on the first sheet, '02' on the second sheet, '03' on the third sheet, etc. until all additional sheets are numbered. Be sure to always enter both digits.

When Sheet (item 108) is coded '02' or more, Total Sheets (item 109) is left blank. (Total sheets should only be coded on the first sheet when more than one sheet is completed for a parcel)

When more than one sheet is required for a parcel, items 101-107 must be identical for each sheet.

The maximum number of sheets is 99 although a typical limit of 15 has been found to be sufficient.

Error Printout Explanation:

Error Message: W 108-BLANK OR NON-NUMERIC, 1, ASSUMED

Cause: The value entered for sheet number is not numeric or is equal to blank

Action: NONE; An assumption has been made that this is the first sheet in a series of 1 or more

Description: The system encountered a blank or non numeric value for sheet, and assumed a value of 1 for sheet. If the next sheet in sequence is from the same parcel and is sheet 02 or the next sheet contains different key data the parcel will continue to process. If the next sheet encountered is from the same parcel but is not sheet 2 a terminal error message "T"- GAP IN SEQUENTIAL SHEET NUMBERS, PARCEL NOT PROCESSED" will print. Assuming that the value of 1 was correct and no other problems were encountered the parcel was written to the master file. If the assumption was correct no action is necessary. If the assumption was incorrect the parcel must be deleted and the parcel resubmitted action code = 2.

Error Message: T 108-DUPLICATE SHEET

Cause: Two identical sheets were encountered

Action: Remove the duplicate sheet and resubmit the parcel action code = 2

Description: The system encountered two sheets with identical key data. The system sorts the parcel file by the unique key data number. Since the numbers in the key data were not unique, processing on the parcel was terminated. Correct the sheet number on one of the sheets and resubmit the parcel (all sheets) action code = 2.

Error Message: E 108-INVALID SHEET NO., 1 ASSUMED FOR REMAINING EDITS

Cause: The value entered for sheet number is equal to zeroes

Action: None unless the sheet number assumption is invalid in which case delete the parcel and resubmit

Description: You coded sheet number as zero which is not valid. A (1) was assumed in order to keep the parcel alive. If the assumption was valid then no action is necessary. If the assumption was invalid then you should delete and re-add the parcel in the next batch.

Error Message: T 108-EXCEEDS TOTAL SHEETS

Cause: The value coded for Item 108 sheet is greater than the value coded for total sheets Item 109

Action: Correct Item 108 sheet or Item 109 total sheets and resubmit the parcel action code = 2

Description: The sheet number cannot exceed the value coded in total sheets. Either you have coded the incorrect sheet or total sheet number. Correct the one in error and resubmit the parcel. An assumption cannot be made since the position of the sheet in the parcel is not known.

TOTAL SHEETS

Source: Individual coding parcel

Required: For all parcels, on sheet 01 only

Data type: Numeric, leading zeros required

On only the first sheet (item 108 = 01) enter the total number of sheets used for the parcel. On sheets 02 or more leave both columns blank.

The maximum number of sheets is 99, although a typical limit of 15 has been found to be sufficient.

This item should be completed only after all work has been completed on the form and the coder is able to count all sheets needed to accumulate the information on the property.

Error Printout Explanation:

Error Message: T 109-INVALID TOTAL SHEETS NUMBER

Cause: The value entered for Item 109 total sheets is not numeric or is equal to zeroes

Action: Correct the total sheets number and resubmit the parcel action code = 2

Description: An invalid total sheets number value has been entered in the total sheets number field. This value is not numeric or is equal to zeroes. The parcel has not been added to the master file. Correct the error and resubmit the parcel action code =2. This error message will only be written for sheet one of the parcel. All sheets must be resubmitted for the parcel.

Error Message: W 109 - GAP IN SEQUENTIAL SHEET NUMBERS, PARCEL PROCESSED

Cause: A trailing sheet is not numbered in order

Action: Check the sheet numbers in the parcel to ensure that they are numbered consecutively. Resubmit the parcel (all sheets) action code = 2

Description: The system has encountered sheet numbers out of sequence which is not allowed in a sequential file. Generally what has happened is a sheet with a different key data has been encountered before the number of sheets in item 109 total sheets has been encountered.

Error Message: E 109 - MISSING TRAILING SHEET FOR PREV ACCEPTED PARCEL

Cause: An add (action code = 2) has been processed with total sheets greater than 1 but the next sheet to follow in sequence has a different key data.

Action: Resubmit the parcel if there should have been trailing sheets - otherwise no action necessary.

Description: The system has encountered a situation where the first sheet of a parcel indicates that there are more trailing sheets to follow (i.e. total sheets greater than 1); however, when it examines the next sheet to follow it finds that the next sheet has a different key data. An error message is written and the first sheet is allowed to build on the master file. You should check the parcel to see if there are any trailing sheets. If there are no trailing sheets no action is necessary. If trailing sheets should be coded for the parcel send the proper trailing sheets in as an add.

ACTION CODE

Source: Individual coding parcel

Required: For all parcels on all sheets

Data type: Coded

There are two methods for correcting (updating) the parcel master file. First, the file may be updated by Deleting, Adding, or Replacing entire parcels (Parcel Update Method). Second, the file may be updated by replacing specific items on a parcel (Item Update Method).

A. Parcel Update Method

1. Delete (1)

Deleting a parcel from a master file will permanently remove all information pertaining to that parcel (including the Parcel Identifier) from the file. For example, if a parcel is to be split, the original parcel may be Deleted from a master file and then two new parcels added to the file(s).

Selected single sheet(s) can be deleted.

a. Changes to the Parcel Identifier

A parcel must be Deleted then resubmitted as an Add if there is any change to the following Parcel Identifier items.

101 County	105 Quarter Section Block
102 Township	106 Quarter Section Lot
103 Section	107 Unit Number
104 Quarter Section	108 Sheet

b. How to Delete

(i) The RIUF (Residential Item Update Form) may be submitted to delete a parcel. One RIUF can delete one sheet, several sheets or all sheets.

(ii) To delete a parcel, only the following line items are to be completed.

101 County	106 Quarter Section Lot
102 Township	107 Unit Number
103 Section	108 Sheets
104 Quarter Section	109 Total Sheets
105 Quarter Section Block	110 Action Code (= 1)

(iii) Line item 108 controls at which sheet deletion will start. Line item 109 controls number of sheets to be deleted.

Example 1: Parcel contains 10 total sheets; sheet number 7 must be deleted.

Item 108 = 07
Item 109 = 01

Example 2: Parcel contains 10 total sheets; sheets 5, 6, 7, and 8 must be deleted.

Item 108 = 05
Item 109 = 04

2. Add (2)

All parcels new to the system or resubmitted parcels with terminal errors on the initial input are Added to the master file. Trailing sheets can be added to the master file at any time; however, you must pay attention to the order of the sheets currently on file. To add a trailing sheet select the sheet number that you want to add and code it Action Code = 2. If the sheet is already on file the system will notify you that the sheet is a duplicate.

The Action Code must be coded "2".

3. Replace (3)

A parcel should be Replaced when several RIUFS (Residential Item Update Form) are required to make all necessary changes.

If you desire to simultaneously delete and add a currently existing parcel, use the replace (3) action code.

Action Code must be coded "3".

B. Item Updating Records - Residential Item Update Form (RIUF)

1. The RIUF is utilized to delete parcels and sheets or to change items on the RDCF3. In order to delete a parcel or sheet the key data section is completed and a 1 is coded in the action code. Guidelines for using the delete action code are provided in section A1.

2. The RDCF is also utilized to modify non key data fields on RDCF that have already been processed. In order to item update a parcel the key data section is completed to identify the parcel and sheet number that you want to update, then an action code of 4 is coded to indicate that you want to update fields. Item updates are processed in the Item Update Data section of the R.I.U.F. The item number of the item that you want to update is written in the rectangular box on the left hand side of the form. The data that you want to appear on the RDCF should be coded in the tick mark divided area on the right of the RIUF. The RIUF is designed "free form" in the sense that any item can be updated on any line. But problems can occur if special care

is not taken when coding the data. The problem encountered in coding RIUF is that the update must be coded exactly as it would appear on the RDCF. The best method of coding the RIUF is to account for each numeric data field on the RDCF on the RIUF by using leading and trailing zeroes. For example, if you are item updating Item 307 "Sq Ft. Area" then you must account for 6 spaces on the item update form. Asssuming that you want to update the RDCF to 2800 sq. ft. you should code the item update as 002800 (see figure 1), the two leading zeroes ensure that the 2800 sq. ft. appear in the proper position on the RDCF. Had you not coded the leading zeroes and coded 2800 the RDCF would be updated incorrectly to "2800 blank blank" which is not a valid number. Alphanumberic fields i.e. "property street name" are less critical than numeric fields when item updating because the end result of a one or two position shift in the field does not substantially affect its readability. However, alphanumeric fields should also be carefully coded in order to improve readability and maintain some quality in computer sorts. If you continually left justify your property street name so it will sort out in alphabetical order then you must left justify your item updates too. A one position shift on an item update will result in a one position shift on the RDCF and ultimately the field that you updated being sorted far away from "Like" parcels. The best policy for both numeric and alphabetic fields is to adopt the habit of treating the RIUF as a mirror image of the RDCF. Use leading and trailing zeroes to ensure that you account for all positions of the field that you are updating. For alphanumeric fields right or left justify your coding or ensure that the proper number of spaces before or after the coding are accounted for. If you are item updating fields that have decimal points (.), date bars(/) or implied spaces (i.e. 708 Enumerated on) it is not necessary to code these characters - they will be automatically accounted for. See figure 1 for examples of coding. Make sure that you code all + or - fields in item numbers 506, 522, 548, and 560. Note there are no spaces between the + or - and the first digit of the number when item updating.

Error Message: T 110 - ONLY ONE DELETE SHEET PER PARCEL REQUIRED

Cause: A delete sheet has been coded to delete sheet 1 of a parcel and a second delete sheet has been coded to delete sheet 2. Deleting sheet 1 automatically deletes all trailing sheets.

Action: None - All Sheets Have Been Deleted.

Description: The system is designed to delete all trailing sheets when sheet one is deleted, thus deleting the whole parcel. By sending in a delete for sheet one and a delete for any trailing sheet you are duplicating the delete which is unnecessary. Trailing sheets can be deleted individually as long as sheet one is not being deleted.

ITEM UPDATE FORM

KEY DATA

		→ 03	1
101	County	#04	04
102	Township	# 06	2093
103	Section	# 10	06
104	Quarter Section: 1 = NE 2 = NW 3 = SW 4 = SE	12	3
105	Quarter Section Block	# 13	21
106	Quarter Section Lot	# 15	08
107	Unit Number	# 17	0000
108	Sheet	# 21	01
109	Total Sheets	# 23	01
110	Action Code 1 = Delete 4 = Item Up	#25	4

ITEM UPDATE DATA

307	002800 (CØRRECT)
307	2800 (INCØRRECT)
307	2,800 (INCØRRECT)
506	+005 (CØRRECT)
506	+ 005 (INCØRRECT)
506	+5 (INCØRRECT)
506	+ 5 (INCØRRECT)
506	5 (INCØRRECT)
512	25 (CØRRECT)
512	2.5 (INCØRRECT)
512	2 5 (INCØRRECT)
708	1183 (CØRRECT)
708	11/83 (INCØRRECT)
708	11 83 (INCØRRECT)
713	0000075 (CØRRECT)
713	75 (INCØRRECT)
713	7.5 (INCØRRECT)
	113 00015 (INCØRRECT)
211	Short Legal Description
	YØU CAN WRITE ANYTHIN G YØU LIKE IN ITEM 211 SHØRT LEGAL DESCR IPTIØN. BØTH ALPHABET IC AND NUMERIC ARE ØK

10/83 RIUF—1

IDENTIFICATION DATA ITEMS

PART V

201.1

Source: County Municipality List

Required: For all parcels

Data type: Alphanumeric

A. Definition of Municipality

1. An incorporated city or town must be a municipality.

2. An unincorporated village or settlement may be a municipality if it has one of the following.

   a. Post Office
   b. Special taxing district for public services (i.e. S.I.D.).

B. Rules governing the coding of a Municipality

1. A parcel (Quarter Section Lot) cannot have two municipality codes. For example, one parcel cannot be both inside and outside of an incorporated town.

   a. The city/town limits of an incorporated city/town will divide parcels (Quarter Section Lots).
   b. An unincorporated village or settlement has no "city limits" therefore the parcel boundaries will be the "city limits".

2. If a parcel is not in a municipality enter "XXX".

3. Codes for each municipality will be found on the County Municipality List. Corrections to the list must be made on the Municipality Master File Update Form and mailed to the Helena office.

Error Printout Explanation:

Error Message: E 201-PARCEL NOT FOUND ON MUNCIPALITY FILE

Cause: The system compared the parcel municipality data with the Municipality File and the information did not match.

Action: Correct the errors by submitting an Item Update Form Action Code = 4

Description: The system compares the County Number, Municipality Code and Levy District of the parcel with the Municipality File. In the above case one of these three data items did not match the Municipality File. Check your Municipality File listing to find the proper coding. If after reviewing the Municipality Listing you find that your codes were correct and not on the Municipality File or were on the

file but were listed incorrectly, complete a Municipality Master File Update Form with the appropriate corrections and submit the udpate to the Helena office.

If you find that your codes are correct, your listing of the Municipality File is also correct, and all three data items match, call the Helena office for assistance.

Error Message: W 201 - BLANK, XXX ASSUMED

Cause: Item 201 was left blank.

Action: Item 201 was blank, XXX was assumed. If XXX is not correct item update Action Code = 4. If XXX is correct no action is necessary.

Description: The system encountered blanks in Item 201 (Municipality). Blanks are not allowed in Item 201 (Municipality) so XXX was assumed for the field. If there should be a Municipality Code you will have to item update Item 201 to the proper Municipality Code. If there is no Municipality then XXX is correct and no action is necessary. If you don't know what the municipality codes are, look for a computer listing titled "Municipalities" with your county name following the title. If you can't find this listing call the Helena Office and request one. ***Note: If the Municipality exists but no code is listed on the Municipality File for your county, complete a Municipality Master File Update Form and mail it to the Helena office.

MUNICIPALITY MASTER FILE

The Municipality Master File is a list comprised of all cities and towns and their taxing jurisdictions. The purpose of the Municipality Master File is to: (1) Edit the Levy Districts for accuracy and correct location, (2) provide a means whereby information can be presented by taxing jurisdictions.

An example of a use of the Muncipality File would be if a request were made to provide the total market and taxable value of real property in Sunburst, Montana. By utilizing the Municipality Code "SUN" and selecting all residential Data Collection Forms with a "SUN" in Item 201 we could isolate all real property for Sunburst. Once these properties are identified we could use the information contained in the RDCF files to identify exempt properties, various property types, the value of each type and lastly the market and taxable value for Sunburst. Any other information contained on the RDCF can be presented for Sunburst. If you wanted to know the number of 1000 sq. ft. homes in Sunburst that information would be available. If you wanted to know the number of 1000 sq. ft. homes with fireplaces and/or attached garages that information would be available. The logic of selection of data by use of the municipality code can also be used with the Levy District code. For example, if you wanted information for School District #3 and the code was 0283 then all RDCF with a Levy District of 0283 would be selected. If a subdistrict existed in 283 say 4283 and the 4 represented a special improvement district, data could be selected for the SID only. For example, a use might be to produce a list of all landowners in a given SID. Another use might be to determine the effect of an SID increase on a given district.

The individual responsible for completing the Municipality Master File and the RDCF should keep these uses in mind when coding the Municipality Master File Update Form. If you feel that certain districts warrant identification then use the subdistrict features of the ifle. For a list of instructions on completion of the Municipality Master File Update Form please turn the page.

MUNICIPALITY MASTER FILE UPDATE FORM

MUNICIPALITY NAME	County	Municipal Code	Town or City	Zip Code	Taxing Jurisdic.	Area Pop. Growth	Ser. Ctr.	Local School District		State Legal Entity		State Supported Levy	Total Levy	Test Code
								Elementary	High School	Elementary	High			
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	25 26	27 28 29	30	31 32 33	34	35	36	37 38 39 40 41 42 43 44 45 46	47 48 49 50 51 52 53 54 55 56	57 58 59 60	61 62 63 64	65 66 67 68 69 70 71 72	73 74 75 76 77 78 79 80	81

Test Codes: blank = add, D = delete, R = replace

Municipality Master File Update Form
Instructions for Completion

1. Municipality Name (Columns 1-24)

Enter the Municipaltiy Name (city or town), starting in position one. The name of the Municipality may not exceed 24 characters in length.

2. County (Columns 25-26)

Enter the two digit county code that represents the county that the Municipality is located in. The code corresponds to the county license plate number. A complete list of County Codes can be found in the "Data Collection Section" Page 101.2

3. Municipal Code (Columns 27-29)

Enter a three letter code (no numbers) to represent the Municipality that you are adding to the Municipality File. The appraisal office is responsible for deriving the code. The following coding rules must be followed.

Rule 1: The first letter of the code must be the same first letter that is found in the name of the Municipality.

Rule 2: The second and third letters in combination with the first letter should be a meaningful abbreviation that clerks and appraisers can easily remember and understand. For example, Dutton - "Dut", Columbus - "Col".

Rule 3: If you are describing a district that is not located within a Municipality (i.e. outside the corporate limits) code "xxx" in the Municipal Code.

4. Town or City (Column 30)

Enter a "0" for this field. It is not currently being used.

5. Zip Code (Columns 31-33)

Enter the last 3 digits of the zip code for the closest known post office. If the district includes multiple zip codes enter the lower of the numbers. All zip codes are assumed to start with 59.

6. Taxing Jurisdiction (Column 34)

Enter a zero. This field is not currently used.

7. Area Population Growth (Column 35)

Enter a zero. This field is not currently used.

8. Ser. Ctr. (Column 36)

Enter a zero. This field is not currently used.

9. Local School District Elementary (Columns 37-46)

Enter the Elementary School District Number that commonly describes the school district that you are adding to the Municipality File. For example, "002 city" "079J Rural".

It is common for O.P.I. (Office of Public Instruction) designated school districts to be given local abbreviations and descriptions. O.P.I. assigned school district numbers are further broken down into several local abbreviations to reflect the unique mill levy requirements resulting from having more than one school in the school district. Each school has a different debt load, student enrollment, transportation costs, etc. That must be reflected by different levels of mill levy. The local abbreviations and descriptions are normally assigned by the county assessor or county treasurer. You will need to determine (1) Who assigns the local abbreviations in your county and (2) how those abbreviations relate to the O.P.I. assigned school district numbers.

Examples of how such O.P.I. assigned school district numbers and local abbreviations compare are as follows:

O.P.I. Assigned S.D. Numbers	Local Abbreviations
24-24	24-26
21-5	21-047-77
2	2 out
2	002 Peer Fr

101 Local School District High School (Columns 47-56)

Enter the High School District Numbers that commonly describe the school district that you are adding to the Municipality File. For example "007", "21J".

11. State Legal Entity Elementary (Columns 57-60)

Enter the Elementary District Legal Entity Number for the taxing jurisdiction that you are describing to the Municipality File. These numbers are provided in the "Coding for Montana Schools and School Districts", "Montana Educational Directory".

This report lists all valid "operating and non-operting school districts for the state. If you do not have a copy of this report, request one from the Residential-Commercial Bureau. *Note: See Section 16 of these instruction.

12. State Legal Entity High (Columns 61-64)

Enter the High School District Legal Entity Number for the taxing jurisdiction that you are describing to the Municipality File. These numbers are provided in the "Coding for Montana Schools and School Districts", "Montana Educational Directory".

This report lists all valid "operating and non-operating" school districts for the state. if you do not have a copy of this report, request one from the Residential-Commercial Bureau.

13. State Supported Levy (Columns 65-72)

Leave this column blank, it is not currently used.

14. Total Levy (Columns 73-80)

Leave this column blank, it is not currently used.

15. Test Code (Column 81)

Leave Column 81 blank to add a new record. Enter a "D" in column 81 to delete a record. Enter a "R" in column 81 to replace a record.

16. The Municipality Master File has the ability to track taxing jurisdictions below the school district level. For example, Special Improvement Districts, Fire Districts, Mosquito districts, etc. may be uniquely identified through the use of an additional code in the "State Legal Entity, Elementary Column". If you examine the "State Legal Elementary" Code you will notice that the code is four digits in length. The number which fills this code is also four digits but is always preceeded by a zero. By entering a number 1-9 in the zero (first) column of the state legal elementary code you have the ability to create 9 subdistricts wthin a given school district. For example, 0487 represents School District Number 2, 1487 represents a rural fire district within School District Number 2. 3487 may represent a Mosquito Control District while 4487 may represent the intersection of all three districts, School District #2, the Rural Fire District and the Mosquito District. If you determine that you want to set up some sub-districts, make sure that you maintain good records. The Residential-Commercial Bureau will not keep records concerning your sub-districts. You are responsible for all sub-district codes and documentation.

ADDITION

Source: Assessment book, property record card, Subdivision File Listing

Required: For all platted parcels

Data type: Alphanumeric

The Subdivision File has several reasons for its creation and maintenance. First, it is an inventory of all platted subdivisions and additions. Second, it locates the subdivision by township, range, section, and levy district. Third, it is a method of abbreviation. The full subdivision name need not be written each time the name is needed to be entered in the computer system. Finally, it provides information to help edit additional data that is entered in the system.

Enter the three character abbreviation for the Subdivision (addition) in which the parcel is located. The Subdivision name will be found in the assessment book or on the property record card, and the corresponding abbreviation can be looked up in the addition code list for the county.

In the case of unplatted parcels, enter "XXX".

Error Printout Explanation:

Error Message: W 202-PARCEL NOT FOUND ON ADDITION FILE

Cause: The system compared the parcel addition data with the Subdivision File and the information did not match.

Action: Correct the errors by submitting an Item Update Form Action Code = 4.

Description: The system compares the County Number, Township Number, Section and Addition Code of the parcel with the Subdivision Master File. One of the four data items did not match the Subdivision Master File. Check the Subdivision Listing for your county and ensure that your coding for county, assigned township, section and addition codes are correct.

If you find that the addition code that you are trying to use is not listed or is in error, complete a Subdivision Master File Update Form and submit it to Helena. If you find that the codes match and no other errors are present, call the Helena office.

Error Message: W 202-BLANK, XXX ASSUMED

Cause: Item 202 (Addition) was coded blank which is an invalid response; a value of XXX was assumed.

Action: Item update Action Code = 4 if XXX is not a valid response. If XXX is valid for the parcel then no action is necessary.

County Number _____
Page _____ of _____
Submission Date _____

SUBDIVISION FILE UPDATE FORM

(PLEASE PRINT AND USE PENCIL)

SUBDIVISION NAME	COUNTY NUMBER	Township Tier Number	HALF (0 or 5)	Direction (N or S)	Range Number	HALF (0 or 5)	Direction (E or W)	ASSIGNED TOWNSHIP NUMBER	Section Number	Subdivision Code	LEVY DISTRICT CODE		ACTION CODE Blank – Add R – Replace D – Delete	CARD CODE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52	53 54	55 56	57	58	59 60	61	62	63 64 65 66	67 68	69 70 71	72 73 74 75	76 77	78	79 80
1														0 2
2														
3														
4														
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27														
28														
29														

DATE OF PROCESSING: _____

INITIALS: _____

REVISED SEPT., 80

Description: The system encountered blanks in Item 202 (Addition). Blanks are not allowed in Item 202 (Addition) so a value of XXX is assumed. If there should be an Addition Code then submit an Item Update Form Action Code = 4. If there is no addition then no Addition Code is necessary and the value of XXX is appropriate.

If you do not know the proper Addition Code for a parcel then check your Subdivisions Printout (a computer listing of additions or subdivisions for your county). If no list is available for your county call the Helena office and request one.

The remainder of this discussion will be on maintenance of the Subdivision File.

A. LISTINGS

The subdivision file can be printed in either of 2 sorted orders.

. Alphabetical by Name within a county.

. Township and Range within a county.

Listings will be printed statewide semiannually. Additional listings will be printed monthly for those counties that have requested updates to their county subdivison file.

B. SUBDIVISION FILE UPDATE FORM

When changes are to be made to the file, a properly completed Subdivision File Update Form must be sent to Bureau headquarters in Helena for processing. The following is a description of how to complete this form (see Example 1 of a properly completed form).

1. Subdivision Name (1-52)

Print the subdivision title, left justified, in columns 1-52, inclusive. List each word of the title fully and provide a blank column between each word. Whenever possible it is preferable to record the complete title without abbreviation of words and the use of punctuation marks. If, because of lack of space, abbreviations must be used, please see Property Street Name (Item 209) for the recommended abbreviations.

2. County Number (53, 54)

Print the two digit county number. Be sure to enter both digits, (i.e. leading zero required). See County (Item 101) for further instructions.

3. Township Tier Number and Direction (55-58)

The township tier number and direction is the first half of a series of numbers and letters in a township designation. It

refers to the number of the tier of townships North or South of the Montana Base Line in which the township is located. Normally it is found written or printed as T27N, T14S. See Township (Item 102.)

Print the whole township tier number, right-justified. If the whole tier number has only a single digit, enter a leading zero.

a) If the township tier number is a whole number only (no half township tier number), enter a zero ("0") in column 57. If the township tier number indicates that the subdivision is located in a township with a half tier number, i.e. "T12½N", enter a "5" in column 57.

Note: Only "0" or "5" may be entered in column 57, but you must complete this column.

b) If the township tier designation indicates that the township lies North or South of the Base Line enter "N" for North or "S" for South in column 58.

Note: Only "N" or "S" may be entered in column 58, but you must complete this column.

4. Township Range Number and Direction (59-62)

The township range number and direction is the second half of a series of numbers and letters in the township designation. It refers to the number of the range of townships East or West of the Montana Prime Meridian in which the township is located. Normally it is found written as R18E or R10W. See Township (Item 102.)

Print the whole township range number, right-justified. If the whole township range number is a single digit, enter a leading zero.

a) If the township tier number is a whole number only (no half township range number), enter a zero ("0") in column 61. However if the township range number indicates that the township with a half tier number, i.e. "R27½W", enter a "5" in column 61.

Note: Only "0" or "5" may be entered in column 61, but you must complete this column.

b) If the township range designation indicates that the township lies East or West of the Montana Prime Meridian enter "E" for East or "W" for West in column 62.

Note: Only "E" or "W" may be entered in column 62, but you must complete this column.

5. Assigned Township Number (63-66)

Enter the four digit assigned Township number. See Township (Item 102) for a complete discussion.

6. Section Number (67-68)

Enter the two digit Section number (i.e. leading zeros required). See Section (Item 103) for a complete discussion.

7. Subdivision/Addition Code (69-71)

Enter the three digit assigned Subdivision code. The first digit (in column 69) must always be an alpha character and the same letter of the alphabet as the first letter in the subdivision title (e.g. "Big Spring Tracts" BST). The second and third digit may be either an alpha or numeric character. The assignment of the second or third characters of the code are left up to the person preparing the subdivision update with the following rules.

a. The three assigned digits cannot duplicate the assigned code for any other subdivision code in the county.

b. Where possible, the assigned code should bear some relationship to the subdivision title such as:

Title	Code
Bannack Original Township	BAN
Certificate of Survey No. 17	C17
Evergreen Farm Lots	EVG
Evergreen Farm Lots Amended	EVA
Mountain View Homes (Dillon)	MVH

c. If the subdivision name begins with an "X" (e.g. Xenon Add) do not use numeric characters for the second or third digits. It may interfere with the Map Code (Item 213).

8. Levy District Code (72-75)

Enter the four digit Levy District code. See Levy District (Item 205) for a complete discussion.

Note: Columns 76 and 77 are to be ignored by the field collection staffs.

9. Action Code (78)

The action code is the instruction to the computer that the data coded should be added to, deleted from, or replaced on the subdivision file.

a. Any change to the following "key fields" will require a delete and an add.

1) County
2) Assigned Township Number
3) Section Number
4) Subdivision Code
5) Levy District Code

b. Any change to the other "data fields" will require only a replace.

c. The Action Code is to be coded as follows:

1) Blank = Add

2) R = Replace

3) D = Delete

10. Card Code (79-80)

This field is to be ignored by the field collection staffs.

C. ERROR EDIT REPORTS

After keypunching and processing, the computer reviews the entries for accuracy. If an error is discovered, it will print an error message and list the transaction in error.

A transaction is defined as a line of data on the Subdivision File Update Form; and its required action (i.e. Add, Replace, Delete).

If an error is listed, the transaction did not take place. It is an all or none situation. If any part of the transaction fails the entire transaction is rejected. One must be careful to thoroughly review the processed information against the coded information for the error. After the error is discovered and resolved; submit the correction on another Update Form. Do not reuse the old form.

The errors and their corresponding descriptions are as follows:

1. A TRAN REC WITH KEY LESS THAN OLD REC BUT NOT ADD

This error indicates that the "key fields" of the transactions did not match the "key fields" of any entry on file in the computer. Carefully review the "key fields" of the error listing against the coded information against the source document. Look for errors in coding such as zeros coded as 0's, etc.

2. ONE DUPLICATE TRAN RECORD FOLLOWS

Within one batch, no add or delete transactions can have the "key fields" coded exactly the same.

ADDITION BLOCK

Source: Assessment book, property record card

Required: For all platted parcels with numbered blocks

Data type: Alphanumeric

Enter the number of the block within the addition in which the parcel is located. Be sure to always enter all three digits.

For unplatted parcels, or additions in which all lots have been grouped together without division into blocks, enter "000".

Error Message: W 203-BLANK; ZEROS ASSUMED

Cause: The addition lot was left blank.

Action: Item update Action Code = 4 if Addition Block should have been coded. If zeros are valid no action is necessary.

Description: The system encountered blanks in the field Addition Block on sheet one of the parcel. Blanks are not a valid response for this field. Zeros were automatically coded by the system. If zeros are not correct you should item update the field. If zeros are correct no action is necessary.

ADDITION LOT

Source: Assessment book, property record card

Required: For all platted parcels with numbered lots

Data type: Alphanumeric

Enter the number of the lot, within the block within the addition, on which the parcel is located. If the parcel occupies more than one lot, and/or portions of lots, enter the lowest numbered lot so occupied. Be sure to always enter all three digits, adding leading zeros if necessary.

When the parcel occupies more than one lot and/or portions of lots, enter all lot numbers in Item 211 (Short Legal Description).

For unplatted parcels, or parcels in an addition where numbered blocks have not been split into numbered lots, enter "000". In the latter case, portions of those blocks may be sold by metes and bounds description.

Item 211 (Short Legal Description), should be used to describe any portion of a lot and to describe metes and bounds lots.

Note: On rare occasions, letters may be included in the lot number. In this case, enter the letters as part of the number.

Error Message: W 204-BLANK; ZEROS ASSUMED

Cause: Addition Lot has been left blank on sheet one of the parcel.

Action: Item update Action Code = 4 if the zero assumed value is not correct. If zeros are correct no action is necessary.

Description: The system encountered blanks in the field Addition Lot on sheet (1) of the parcel. Blanks are not a valid response for this field. Zeros were automatically coded by the system. If zeros are not correct you should item update the field Action Code = 4. If zeros are correct no action is necessary.

LEVY DISTRICT

Source: Assessment book; Levy District Code List (for the county), Municipality Listing, State Legal Entity (Elementary).

Required: For all parcels lying within a levy district

Date type: Alphanumeric

Enter the state code of the Levy District in which the parcel is located. The county Levy District number will be found in the assessment book entry for the parcel, and the corresponding state code can be looked up in the levy district code listing for the county. Be sure to always enter all four digits, adding leading zeros if necessary.

If the parcel does not lie within a Levy District, enter "0000".

Error Printout Explanation:

Error Message: W 205-BLANK; ZEROS ASSUMED

Cause: Levy District has been left blank on sheet one of the parcel.

Action: Item update Action Code = 4 if the zero assumed value is not correct. If zeros are correct no action is necessary.

Description: The error message listed above was printed because Item 205 was not coded. Most parcels will be located in a levy district but some will not. If you do not know the levy district number check your Municipality Master File Listing under the column "State Legal Entity". The proper levy district should be listed there. If you do not have a Municipality Listing contact your Area Manager or call the Helena office. If the parcel is not located in a levy district then code 0000 in the levy district.

Error Message: W 205-INVALID; NOT FOUND ON MUNICIPALITY FILE

Cause: When the system compared the Levy District (Item 205) with the Municipality Master File one of three items did not match: County Code, Municipality Code, Levy District

Action: Item Update Action Code = 4 to correct the invalid code or change the Municipality File with a change on the Municipality Master File Update Form.

Description: Item 205 (Levy District) is checked against the Municipality Master File for validity. Three items must match exactly in order for Levy District to be valid. The three items are County (Item 101) Municipality (Item 201) and Levy District (Item 205). Should any of these 3 items not

match, the Levy District is not considered valid. If you receive this error, your problem is most likely in one of two places. Either you have incorrectly coded Item 205 (or it was punched wrong), or the Municipality Master File is not correct. If you coded wrong then find the correct district on the Municipality Master File and submit an Item Update Form Action Code = 4. If the Municipaltiy File is in error then correct the Master File by submitting a Municipality Master File Update Form. If all items match and you still receive this error notify your Area Manager or call the Helena office.

OWNERSHIP TYPE

Source:

Required:

Data Type:

Leave this item blank. Coding instructions will be forthcoming.
Not checked for errors.

PROPERTY TYPE

Source: Data collector

Required: For all parcels

Data type: Coded, Numeric Only

Enter the code for the type of property which is the predominant use of the parcel.

1 Residential
Single Family Residence

2 Apartment
2 or more dwelling units

3 Commercial
Property which is used or intended for use as a business of any type.

4 Industrial
Property intended for the assembling, processing, and manufacturing of finished or partially finished products from raw materials or fabricated parts.

5 Agricultural

6 Other
Property that does not fall in any other category (e.g., Special use) Railroad property
Utility property
Co-op property

9 Exempt

Error Printout Explanation:

1. Error Message: W 207-BLANK OR NON-NUMERIC; ZERO ASSUMED

   Cause: Property Type (Item 207) was left blank or was coded with a non-numeric value on a trailing sheet. A value of zero was assumed.

   Action: No action is necessary if zero is a correct response. If zero is incorrect, item update the parcel with an Item Update Form Action Code = 4.

   Description: The system encountered a trailing sheet that did not have a valid Property Type coded. Either the field was left blank, not punched, or was coded or punched with a nonnumeric character. If the sheet contains any land or improvements then Property Type should be coded. If no land or improvements are coded then 0 should be coded in Property Type.

2. Error Message: W 207-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Property Type (Item 207) was coded with a non-numeric or blank value on sheet 1 of a parcel. A value of 1 or Residential was assumed.

Action: No action is necessary if the parcel is residential, however, if it is not residential then you should item update Item 207 (Property Type) to the proper value.

Description: The system encountered a sheet one with a blank or invalid property type. Since all properties must be categorized a value of Residential was assumed for the parcel. Residential was assumed because it is the predominant type of property used in this system. If the "Residential" Property Type assumption is invalid then item update the parcel Action Code = 4. If the assumption is valid then no action is necessary.

3. Error Message: W 207-OUT OF RANGE, 1 ASSUMED

Cause: A value less than 1, equal to 7 or 8, or greater than 9 was coded for Property Type. These values are not valid.

Action: Determine the correct value for Property Type and submit an Item Update Form Action Code = 4.

Description: Property Type was either punched or coded with a value which was out of range. The valid values are 1, 2, 3, 4, 5, 6 or 9. All other numeric values are out of range. Check to see what you coded on the RDCF3 or RIUF and correct the error with an Item Update Form Action Code = 4.

PROPERTY STREET NUMBER

Source: Assessment book, property record card

Required: For all parcels with street numbers

Data type: Numeric

Enter the street number, right-justified. Do not enter any fraction or letter designation under this item. That will be included in Item 209, (Property Street Name).

Error Printout Explanation:

Error Message: W 208-INVALID PROPERTY STREET NUMBER

Cause: Property Street Number was left blank when the parcel was located in a municipality on sheet one of a parcel.

Action: Item update the Property Street Number Action Code = 4 if necessary. If blank is correct no action is necessary.

Description: On sheet one of a parcel the Property Street Number was left blank. The system looked at Municipality Code to see whether or not the parcel was located in a Municipality. Since the parcel was located in a Municipality it is suggested that the parcel should have a Street Number Address. If the parcel does not have a street number enter zeros or leave it blank. This is only a warning message and will not affect the costed value.

PROPERTY STREET NAME

Source: Assessment book, property record card

Required: For all parcels with street names

Data type: Alphanumeric

Enter the street name, left-justified. Leave one blank space between words, abbreviations and numbers. If the parcel has a fractional street number or letter designation, leave one blank space after the street name and designation and then enter that fractional street number or letter designation. Record any fraction by two digits separated by a slash ("/").

Blank spaces are to be used in lieu of periods and/or commas. Recommended abbreviations appear on the next page.

If the parcel has no street name, enter "X".

Error message: E 209-BLANK; X MARKER ASSUMED**

Cause: On sheet one of a parcel, Property Street Name was left blank so the system assumed a value of X (or filler).

Action: Complete an Item Update Form Action Code = 4 to update the Property Street Name. If no property street name is available, no action is necessary.

Description: Property Street Name was left blank on sheet one of a parcel. The system placed X's in the field to indicate no name was available. If the name is available you should code it on an Item Update Form Action Code = 4. If no address is available then no action is necessary.

RECOMMENDED ABBREVIATIONS

Alley	AL
Arcade	ARC
Avenue or Avenida	AV
Boulevard	BLVD
Branch	BR
Bridge	BRIG
Bypass	BYP
Calle	C
Causeway	CSWY
Center	CTR
Church	CHR
Circle	CIR
Common	COM
Court	CT
Cove	COVE
Crescent	CRES
Crossing	CRSG
Drive	DR
East	E
Expressway	EXWY
Foot	FTE
Freeway	FRWY
Gardens	GDNS
Highway	HWY
Inches	IN
Lane	LA
Loop	LOOP
Mall	MALL
Manor	MNR
Mews	MEWS
Motorway	MTWY
North	N
Oval	OVAL
Overpass	OVPS
Park	PARK
Parkway	PKWY
Pass	PASS
Path	PATH
Pike	PKE
Place	PL
Plaza	PLZ
Point	PT
Ramp	RAMP
Road	RD
Route	RTE
Row	ROW
Rue	RUE
Skyway	SKWY
South	S
Square	SQ
Street	ST
Suite	STE
Terrace	TER
Throughway	THWY
Trafficway	TFWY
Trail	TRL
Tunnel	TUN
Turnpike	TPKE
Underpass	UNP
Walk	WALK
Wall	WALL
Way	WY
West	W

PROPERTY ZIP CODE

Source: Zip code directory

Required: For all parcels

Data type: Numeric

Enter left justified the last three digits (7 if available) of the zip code for the area where the parcel is located. The first two digits are known to be "59" for the entire state. Be sure to always enter at least three digits.

Error Printout Explanation:

Error Message: E 210-BLANK OR NON-NUMERIC; ZEROS ASSUMED

Cause: The Property Zip Code has been coded with a blank or non-numeric value. Zeros were assumed.

Action: Item update Action Code = 4 with the proper zip code for the parcel location.

Description: All parcels located within the State of Montana must have a Property Zip Code. If you are not certain about the zip code use the zip code of the closest known post office. The reason this error message appeared was because the zip code was either blank or was coded with a non-numeric value. Identify the proper zip code and item update the parcel Action Code = 4.

Error Message: W 210-LAST 4 NON-NUMERIC, ZEROS ASSUMED

Cause: The last 4 digits of the 9 digit zip code are not numeric or blank. Zeros were assumed.

Action: No action is necessary unless you want the last 4 of 9 total zip code numbers to be coded something other than zero, if so item update Action Code = 4

Description: The first two digits of the zip code are "hard coded" on the appraisal form. The third through the fifth digits are typically coded by the appraiser with the last 4 digits (6-9) coded if they are available. The error message printed because the last four digits of the zip code were not numeric and not blank on sheet one. This indicates that alphabetic characters or special symbols were found in the last four digits. If the last four digits are available and you want them coded then item update Action Code = 4. If the assumed value of zero is correct then no action is necessary.

SHORT LEGAL DESCRIPTION

Source: Assessment book

Required: For parcels which occupy portions of lots; For parcels in additions which have not been split into numbered lots; For unplatted parcels.

Data type: Alphanumeric

If "000" has been entered in Item 204 (Addition Lot), the parcel is unplatted or it is in an addition where the blocks have not been split into numbered lots. In these cases, the legal description must be entered in this item, left-justified.

It is recognized that in some cases the space may not be sufficient to contain the entire legal description; but it should be adequate to pinpoint and separate different portions of a larger area having a common description. When the description includes a portion of a lot, it must enumerate the portion of the lot. If necessary, the description may be continued on one or two succeeding sheets.

If a number has been entered in Item 204, and it represents a single lot parcel, you may enter an "X" in this item.

Error Message: W 211-BLANK; X MARKER ASSUMED

Cause: The short legal section was left blank so a value of X was assumed.

Action: None if the X value that was assumed was correct, otherwise item update Action Code = 4.

Description: A value of X should be coded in Item 211 (Short Legal) if you don't intend to identify the parcel with a legal description. Since the Short Legal was not coded a value of X was assumed. If the assumed value was not correct then you should item update the section in the Short Legal on the RIUF form. If you did not intend to use the Short Legal then no action is necessary.

ASSESSOR'S CODE

Source: Assessment Book

Required: For all parcels with a county that has a local Assessor's Code

Data Type: Alphanumeric

Enter the code used by the local County Assessor to identify property within that county. Care and judgement must be used to right or left justify the code number within this field so that computer sorting routines will produce an intelligible index.

Not checked for errors.

Source: Reconciled Ownership Map

Required: For all parcels

Data Type: Coded, alphanumeric

The Map Code uniquely identifies each map as to township, section and area. The Map Code is a nine digit number consisting of three fields. The Map Code is adaptable to all maps in all counties. The Map Code will be placed in the lower lefthand corner of the map, on any folder containing parcels geocoded on that map, and in this field on each RDCF corresponding to that map.

A. First Field-Township

Field one is the four digit assigned township number of the township in which the mapped area lies. Mapped areas of multiple townships will use the lowest numeric assigned township number.

B. Second Field-Section

The two digit section number is the second field. If the entire mapped area is in one section, use that section number.

1. The maps covering property in more than one section, all in the same township, use the lowest section number.

2. For mapped areas in more than one township, use the lowest numbered section in the township with the lowest assigned township number. This may not always be the lowest section number on the map.

3. Township maps and/or computer generated maps are distinguished from other maps by entering 00 in this section.

C. Third Field-Mapped Area

The third field of three digits designates the mapped area. Any of the following eight methods to designate the third field (area) for a map can be used in a county.

1. Township maps and/or computer generated maps: These maps are always XXX.

2. Individual section map: For a map of one complete section this field is XXX.

3. Multiple maps of a section: It is possible to have several maps of the unplatted area of one section, for which the third field should be XXX. To differentiate these maps the appraiser may choose one of the following:

a. The last one or two spaces may be used for numeric digits reflecting a number assigned to the map.

b. Each map may carry a notation (aside from the code) to indicate it is one of several maps, (i.e., 1 of 2, 2 of 2). This would not be part of the actual map code and would primarily serve in the filing of and accounting for the maps.

4. Individual Subdivision/Addition: A map of a complete subdivision/addition will have that subdivision's/addition's three digit addition code for the third field.

5. Certificate of Survey: A certificate of survey will be treated exactly like an individual subdivision map using its three digit addition code in this field.

6. Multiple Maps of a Subdivision/Addition: If a subdivision is drawn on more than one map due to its scale and/or size, use the notation method of 1 of 4, 2 of 4, etc. (see item #3b). This notation will not be coded but serve in filing and accounting for the maps.

7. Maps of Multiple Subdivisions/Additions: For maps covering more than one subdivision but not an entire municipality, the third field will be the alphabetically lowest addition code.

8. Municipality Maps: If an entire municipality is contained on one map, although there may be more than one subdivision in that municipality, use the three digit municipality code for this field.

Not checked for errors.

PERCENTAGE OF OWNERSHIP

Source: Assessment Book

Required: For all parcels with a specified divided percentage of ownership

Data Type: Numeric

Enter the numeric equivalent of the Percentage of Ownership (i.e. 1/2 = 5000, 1/3 = 3333, etc.). The decimal point is implied and must not be coded. The full value of the parcel's components must be listed and not a pro-rated amount (e.g. Front Foot Value = $35.00; owner has a specified one-half ownership; Item 309 = $35.00 not $17.50). If there is no divided ownership enter a zero.

Error Message: W 214-NON-NUMERIC, 100% ASSUMED

Cause: A non-numeric value was encountered by the system. Non-numeric fields are not allowed.

Action: A value of 100% ownership was assumed for Percentage of Ownership. If the value is not correct item update Action Code = 4.

Description: Sheet one of the parcel contained a non-numeric value in the Percentage of Ownership field. The system moved 0000 into the Percentage of Ownership field which indicates an ownership of 100%. If the 100% ownership is not correct then you should item update Action Code = 4. If the 100% ownership that was assumed was correct no action is necessary.

Error Message: W 214-POSSIBLE MULTIPLE OWNERS INDICATED IN ITEM 107

Cause: Item 107 is not = 0000, indicating that a multiple ownership may exist. Since percentage of ownership is equal to zeros this message is issued.

Action: None if there are no multiple owners. If multiple owners exist then item update Action Code = 4.

Description: Unit Number and Percentage of Ownership are both designed to indicate multiple ownerships. In this case percentage of ownership is equal to zeros or 100% ownership and unit number if greater than zeros and indicates a possible multiple ownership. Since the two items appear to conflict this message is issued. It is possible that you utilized Unit Number to describe mobile homes or as a mapping aid. In this case ignore the message. If there are multiple owners then item update Item 214 (Percentage of Ownership) Action Code = 4 to the proper value.

Error Message: E 214-MULTIPLE OWNERS NOT INDICATED IN ITEM 107.

Cause: Unit Number = 0000 and Percentage of Ownership is not equal to zeros. These two items conflict.

Action: Item update Unit Number or Percentage of Ownership to indicate multiple owners or no multiple owners depending on which is correct.

Description: Unit Number is equal to zeros and does not indicate that multiple owners are present. Percentage of Ownership is coded something other than 0000 which indicates that the ownership is split. If the ownership is truly split you should item update Item 107 (Unit Number) Acton Code = 4. If the ownership is not split then you should item update Percentage of Ownership Action Code = 4.

OWNER LAST NAME

Source: Assessment Book

Required: For all parcels with known owners

Data type: Alphanumeric

Enter the last (or corporate) name of the parcel's owner (the taxpayer), left-justified. If the name consists of more than one word, leave one blank space between words. Abbreviate with care if necessary.

For parcels having multiple owners with different last names, enter the additional owners on one or two succeeding sheets only if the two owners have an undivided interest in the same property.

Two or more owners with divided interests in the same property will be listed on separate forms (RDCF) with differing key data and explanation in the legal description. The difference in the ownership will be indicated by the percentage of divided interest listed in Percentage of Ownership (Item 214).

If the ownership of the parcel is unknown, enter "Unknown."

Error Message: W 215-BLANK; "UNKNOWN" ASSUMED

Cause: The Owner Last Name section was left blank on sheet (1) of a parcel.

Action: Item update Action Code = 4 to provide the last name. If the last name is unavailable, no action is necessary "unknown" was assumed.

Description: The parcel owner's last name should be coded on the first sheet of all parcels. In this situation since the last name was not provided the value "unknown" was assumed and the above error message was printed. If unknown is not correct then item update the parcel Action Code = 4 with the correct owners last name.

OWNER'S FIRST NAME

Source: Assessment Book

Required: For all parcels with known owners

Data Type: Alphanumeric

Enter the first name and initial (if any) of the parcel's owner (the taxpayer), left-justified. Leave one blank space between the first name and the initial. No period is needed after the initial. If there is no owners first name and a last name was coded, enter an X in Owner's First Name.

Error Message: E 216-CANNOT BE BLANK ON SHEET 01

Cause: Owners first name was blank on sheet (1) when owners last name was provided. First name is required.

Action: Provide the owner's first name by utilizing an Item Update Form Action Code = 4.

Description: Since the owner's last name was provided it is assumed that the owners first name is available. If the owner's first name is not available (when the last name was coded) enter an X in the first column of Owners First Name. If no last name was coded no first name will be needed, and "unknown" will be assumed for the last name.

SECOND INITIALS

Source: Assessment Book

Required: For all parcels with known owners

Data Type: Alphanumeric

Enter the initials of the second owner having the same last name as the first owner entered in Item 215. If the owner has no middle name, leave the second or right column blank.

If there is no second owner with the same last name, enter "XX". If the ownership of the parcel is unknown leave both columns blank.

Error Message: W 217-BLANK; XX ASSUMED.

Cause: No second owner's initials were found and no XX was found on sheet (1) of the parcel.

Action: Item update Action Code = 4 if a second owner's initials are available otherwise no action is necessary.

Description: Item 217 (Second Owner's Initials) were left blank. Since it is unknown whether or not a second owner exists and the item was not coded a value of "XX" is assumed. If a Second Owner's Initials should be coded use an item update form Action Code = 4 to provide the proper information.

OWNER ADDRESS LINE #1

Source: Assessment book

Required: For all parcels with known owners and mailing addresses

Data Type: Alphanumeric

Enter the first line of the owner's mailing address, left-justified. This will normally contain street number and name or post office box. Also see Item 209.

If the address is an "in care of" address, enter C/O in the first three columns; space; and then the name (last name first). This will enable the computer to print the individuals with an "in care of" address in an alphabetically sorted index.

When a company or individual wishes to receive their mail through a post office box and also show their street address; the dual address is the answer. When two addresses are used street address and post office box number the box number should always be immediately above the last line in the address. For example:

ABC Company	(Item 215)
907 Power Block Bldg.	(Item 218)
P.O. Box 1234	(Item 219)
Helena, MT	(Item 220)
59601	(Item 221)

If a first line is not required, enter "X".

If the owner of the parcel or the owner's mailing address is unknown mark the first column with an X.

Error Message: W 218-BLANK, X MARKER ASSUMED

Cause: No information was coded in Owner's Address Line 1 and no X's were found on sheet 1 of the parcel.

Action: None if Owner's Address Line 1 was not available. If you find that information is available use an Item Update Form Action Code = 4.

Description: Item 218 (Owners Address Line 1) was not coded and no X's were found. If owners address is available but was omitted then item update Action Code = 4. If owner's address is not available then an X should be placed in column 1 of the field. Values of X were assumed for this field since it was left blank.

OWNER ADDRESS LINE #2

Source: Assessment book

Required: For all parcels with known owners and mailing addresses

Data type: Alphanumeric

Enter the second line of the owner's mailing address, left-justified. This will normally contain city and state. Do not place the usual comma after the city. See Item 220.2 for the proper state postal abbreviations.

If a second line is not required, enter "X".

If the owner of the parcel or the owner's mailing address is unknown, leave all columns blank.

Error Message: W 219-BLANK, X MARKER ASSUMED

Cause: No information was coded in Item 219 (Owner's Address Line 2) and no X's were found on sheet (1) of a parcel.

Action: No action is necessary if no address is available or Line 2 was not needed. If Line 2 should be coded, item update Action Code = 4.

Description: Item 219 (Owners Address Line 2) was not coded and no X's were found. If there should have been information coded in Line 2 then item update Action Code = 4. If no information is available no action is necessary since the system has already assumed a value of X.

OWNER ADDRESS LINE #3

Source: Assessment book

Required: For all parcels with known owners and mailing addresses

Data type: Alphanumeric

If the owner's mailing address requires a third line, enter it here, left justified. This will normally occur only with foreign addresses (enter country), "in care of" addresses (enter "C/O" and name in line #1, street address in line #2, and city state here), and other unusual circumstances.

If a third line is not required, enter "X".

Error Message: W 220-BLANK, X MARKER ASSUMED

Cause: No information was coded in Item 220 (Owner's Address Line 3) and no X's were found on sheet 1 of a parcel.

Action: No action is necessary if no address is available or Line 3 was not needed. If Line 3 should be coded (city, state) then item update Action Code = 4.

Description: Item 220 (Owner's Address Line 3) was not coded and no X's were found. If there should have been information coded in Line 3 then item update Action Code = 4. If no information is available no action is necessary since the system has already assumed a value of X.

STATE POSTAL ABBREVIATIONS

AL	Alabama
AK	Alaska
AZ	Arizona
AR	Arkansas
CA	California
CZ	Canal Zone
CO	Colorado
CT	Connecticut
DE	Delaware
DC	District of Columbia
FL	Florida
GA	Georgia
GU	Guam
HI	Hawaii
ID	Idaho
IL	Illinois
IN	Indiana
IA	Iowa
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MD	Maryland
MA	Massachusetts
MI	Michigan
MN	Minnesota
MS	Mississippi
MO	Missouri
MT	Montana
NE	Nebraska
NV	Nevada
NH	New Hampshire
NJ	New Jersey
NM	New Mexico
NY	New York
NC	North Carolina
ND	North Dakota
OH	Ohio
OK	Oklahoma
OR	Oregon
PA	Pennsylvania
PR	Puerto Rico
RI	Rhode Island
SC	South Carolina
SD	South Dakota
TN	Tennessee
TX	Texas
UT	Utah
VT	Vermont
VA	Virginia
VI	Virgin Islands
WA	Washington
WV	West Virginia
WI	Wisconsin
WY	Wyoming

OWNER ZIP CODE

Source: Assessment Book

Required: For all parcels with known owners and mailing addresses

Data type: Numeric, trailing zeros required

Enter left-justified, the full five digit zip code (9 digit if available) of the owner's mailing address. Be sure to always enter at least five digits.

If the owner's mailing address is in a foreign country and has no zip code, enter "00000".

Error Printout Explanation:

Error Message: W 221-BLANK, 210 PROPERTY ZIP ASSUMED

Cause: Owners Zip Code (Item 221) was left blank on sheet (1) of a parcel

Action: Item update Action Code = 4 if the correct owner's zip code is available or if the zip code assumed is not correct.

Description: Item 221 (Owners Zip Code) was left blank so the system assumed the Property Zip Code (Item 210) should be assumed. If the assumed zip code value is correct no action is necessary. If the assumed value is incorrect then item update Action Code = 4 with the proper zip code or zeros. If the assumption is causing you problems then make sure you don't leave this column blank when you first complete the RDCF.

LAND DATA ITEMS

PART VI

301.1

UNIT OF MEASURE

Source: Property record card after land measurement

Required: For all separately measured segments of land in all parcels

Data type: Coded, numeric only

Enter a digit indicating the unit of measure by which the land value is to be computed. The codes are:

0 None (no land area attached to this parcel)

1 Front foot (FF)

2 Square foot (SF)

3 Acre

4 Site value (flat value)

If a "0" is entered, items 302 through 310 must be left blank. If a "1" is entered, items 302 through 306 and 309 must be entered and items 307, 308, and 310 must be left blank. If a "2" is entered, items 307 and 309 must be entered and items 302 through 306, 308 and 310 must be left blank. If a "3" is entered, items 308 and 309 must be entered and items 302 through 307 and item 310 must be left blank. If a "4" is entered, item 310 must be entered and items 302 through 309 must be left blank.

Error Message: W 301-UNIT MEASURE MUST BE CODED; ZERO ASSUMED

Cause: Item 301 (Unit of Measure) was not coded or was coded with a non-numeric value. This situation occured on sheet one or on a trailing sheet of a parcel.

Action: Item update Action Code = 4, if unit of measure information is available. No action is necessary if the zero assumed value is accurate.

Description: Unit of Measure was not coded or was coded with a non-numeric value (either blank or alphabetic on one of the sheets in a parcel. Since the Item was not coded or was not coded correctly, a value of 0 or no land was assumed. If the assumption of no land was valid then no action is necessary. If the assumption is invalid then item update the parcel Action Code = 4 with the proper information. *** Note zeros were assumed for all other values (302-310) in this section.

Error Message: W 301-OUT OF RANGE; 1 ASSUMED

Cause: Unit of Measure was coded with a value greater than 4.

Action: Item update Action Code = 4 if "Front Foot" is not the unit of measure you want coded.

Description: The value coded for Unit of Measure was greater than the value 4. Since 4 is the maximum value that can be coded the system assumed a value "in range" or Front Foot (1). If the Front Foot assumption is not correct you should item update the Parcel Action Code = 4. *** Note, if the Front Foot unit of measure is not correct and you decided to item update the parcel check items 302-306 for assumed values.

Error Message: W 301-FRONT FOOT ITEM CODED; ITEM 301 = 1 ASSUMED

Cause: Item 301 unit of measure was not coded "Front Foot" but Front Foot items were coded, Front Foot was assumed.

Action: Item update unit of measure Action Code = 4 if Front Foot is not correct, if Front Foot is correct as a unit of measure no action is necessary.

Description: The system found that the Unit of Measure was coded as something other than Front Foot, i.e. (2, 3, 4, 0, blank, etc.) while Front Foot Data items were coded greater than zeros (302-306). Since Front Foot Data items were coded unit of measure was assumed to be incorrect and was changed to 1 "Front Foot". It is only necessary for one Front Foot data item (302-306) to be coded for this automatic assumption to be made.
**Note: This automatic assumption is made for Action Code 2 (add) and 3 (replace) transaction only and does not work for Item update Action Code = 4 transactions. This feature enables the appraiser to update Land Data items without automatic assumptions overriding your updates.

Error Message: W 301-SQUARE FOOT ITEM CODED; ITEM 301 = 2 ASSUMED

Cause: Item 307 was coded while Item 301 was not coded as a 2, 2 was assumed.

Action: Item update the Land Data section Action Code = 4 if the assumed value of 2 was not correct. If Square Foot (2) was a correct assumption no action is necessary.

Description: The system found that Item 307 (Square Foot Area) was coded greater than zero while Item 301 (Unit of Measure), was not equal to 2 (Square Foot). The system assumed that Square Foot should be the Unit of Measure and changed Unit of Measure to Square Foot (2). If the assumption is not correct you must

item update the Parcel Action Code = 4. ***Note: The automatic assumption feature applies only to add and replace transactions and not to update transactions. This feature allows the appraiser to update Land Data items without automatic assumptions overriding your assumptions.

Error Message: W 301-ACRE ITEMS CODED, ITEM 301 = 3 ASSUMED

Cause: Item 308 was coded while Item 301 was not coded as a 3, 3 was assumed.

Action: Item update Action Code = 4, the Land Data items if acre should not be the Unit of Measure. If Acre was the correct assumption then no action is necessary.

Description: The system found that 308 (Acre Area) was coded greater than zero while Item 301 (Unit of Measure) was not equal to 3 (Acre). The system assumed that Acre should be the Unit of Measure and changed Unit of Measure to Acre (3). If the assumption is not correct you must item update the Parcel Action Code = 4. ***Note the automatic assumption feature applies only to add and replace transactions (2 & 3) and not to the update transactions. This feature allows the appraiser to update the Land Data items without automatic assumptions overriding your assumptions.

Error Message: W 301-SITE VALUE ITEM CODED, ITEM 301 = 4 ASSUMED

Cause: Item 310 was coded while Item 301 was not coded 4; 4 was assumed.

Action: Item update Action Code = 4 the Land Data items if Site should not be the Unit of Measure. If Site was the correct assumption then no action is necessary.

Desciption: The system found that 310 (Site Value) was coded greater than zero while Item 301 (Unit of Measure) was not equal to 4 (Site). The system assumed that Site should be the Unit of Measure and changed Unit of Measure to Site (4). If the assumption is not correct you must item update the Parcel Action Code = 4. ***Note: The automatic assumption feature applies only to add and replace transactions (2 & 3) and not to the update transactions. This feature allows the appraiser to update the Land Data items without automatic assumptions overriding your assumptions.

FRONT FOOT WIDTH

Source: Property record card after land measurement

Required: For all land segments where a "1" has been entered in item 301

Data type: Numeric

Enter the width of the segment to the nearest foot, right-justified. The following pages discuss segment measurement for all front foot items (302 through 306).

If a "1" has not been entered in item 301 leave Items 302-306 blank.

Error Message: E 302-MUST BE NUMERIC IF 301 = 1, 0 ASSUMED

Cause: Front Foot width was not coded numeric when Unit of Measure was coded Front Foot.

Action: Item update Action Code = 4 the Front Foot Width with the proper number.

Description: Front Foot was selected as the Unit of Measure in Item 301 but data was not correctly coded in Item 302 (Width). In order to correctly complete the parcel and generate a cost computation value for the land you must provide the width value. A value of zero was assumed since the system had no method of establishing the width of the parcel. Item update Action Code = 4 the parcel width. If for some reason Front Foot should not have been selected as a unit of measure you should item update the Land Data section Action Code = 4.
****Note: The error message E 302-CANNOT = ZEROS will follow this message. This message is to inform you that width cannot remain equal to zeros for Cost Computation to work.

Error Message: E 302-CANNOT = ZEROS

Cause: Item 301 equals Front Foot while Item 302 (Width) equals zeros.

Action: Item update Item 302 (Width) Action Code = 4.

Description: Item 301 (Unit of Measure) was coded 1 (Front Foot) while Item 302 was equal to zeros. Width must be coded in order for Cost Computation to work. Item update Action Code = 4 the Front Foot Width or change your Unit of Measure.

Error Message: W 302-NOT NUMERIC, ZEROS ASSUMED

Cause: Front Foot Width (Item 302) is not numeric.

Action: Item update Action Code = 4 if zero is not a valid entry for Width. If zero is valid no action is necessary.

Description: Item 302 (Front Foot Width) is non-numeric. Since Unit of Measure is not equal to Front Foot then Front Foot should be coded zero. Zero was assumed for the Front Foot Width. If for some reason either Unit of Measure or Front Foot Width should be changed, use an Item Update Form Action Code = 4.

Error Message: W 302-MUST BE ZEROS WHEN UNIT MEASURE NOT = 1, ZEROS ASSUMED

Cause: Unit of Measure was coded greater than 1 and Front Foot Width was coded greater than zeros.

Action: No action is necessary if Front Foot Width should have been coded zeros. If Width should have been greater than zeros Item Update Action Code = 4.

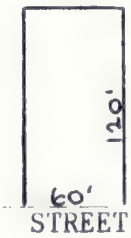
Description: The system encountered a value greater than zeros coded in 302 (Front Foot Width), while the value coded for Unit of Measure was Square Foot, Acre or Site. Front Foot items should only be coded when Front Foot (1) is coded as the Unit of Measure. Zeros were assumed for Front Foot width. No action is necessary if the zero assumption for Width is correct. If Front Foot should have been coded for Unit of Measure then Item update Action Code = 4.

FRONT FOOT MEASUREMENT

This discussion of segment measurement pertains to geometric shapes that are polygons (a shape with three or more straight sides) and which are in general orthogonal (parallel on one or more sides) with the fronting (or nearest fronting) street. This includes right triangles, rectangles, parallelograms, trapezoids, and many other more complicated shapes. Measurement of other types of segments requires more advanced techniques (or square foot measurement) and is not discussed here. The majority of parcels, however, can be measured by the techniques discussed here.

The most common shape of a parcel is a rectangle fronting on a street. Figure (1) below illustrates its measurements.

(1)



The width is 60 feet and the depth is 120 feet. Since it fronts on a street, the backlot setback is 0 feet. It is not triangular so the triangular factor is coded "0". The standard depth is taken from the neighborhood standard.

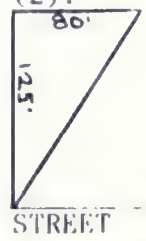
Figure (2) illustrates the measurement of a right triangle fronting on a street.

(2)

The width is 80 feet and the depth is 125 feet. The setback is 0 feet. It is triangular with the apex in the back of the parcel, so the triangular factor is "2". The standard depth is taken from the neighborhood standard (since this is always true, it will not be further repeated).

Figure (3) illustrates the measurement of a right triangle facing in the opposite direction to that in figure (2).

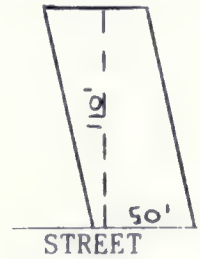
(3)



The width is now measured across the back of the lot, 80 feet. The depth is measured as in figure (2), 125 feet. The setback is 0 feet. Since the apex is in the front of the parcel, the triangular factor is "1".

Figure (4) illustrates the measurement of a parallelogram (a shape with both pairs of opposite sides parallel).

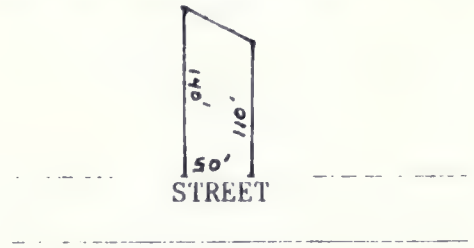
(4)



The width is measured across the front at 50 feet. The depth is measured at a right angle to the front at 110 feet. The setback is 0 feet. The triangular factor is "0" for parallelograms.

Figure (5) illustrates the measurement of a trapezoid (a shape with four sides but only two parallel) where the parallel sides are at right angles to the street.

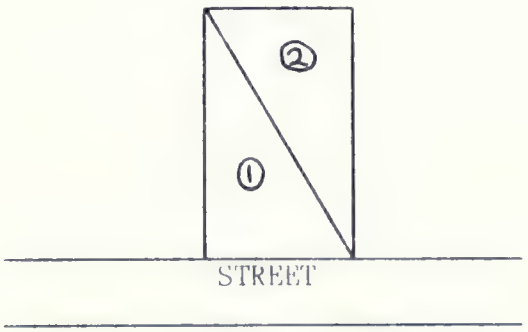
(5)



The width is 50 feet. The depth is the average of the two parallel sides: 110 feet plus 140 feet divided by 2 = 125 feet. The setback is 0 feet, and the triangular factor for trapezoids is "0".

All other more complex orthogonal polygons can be expressed in terms of the simpler shapes discussed above by "segmentation". Such polygons can be broken into simpler polygons ("segments"), and each segment measured separately. As a simple example, a rectangle can be segmented into two triangles, each measured separately, as shown in figure (6).

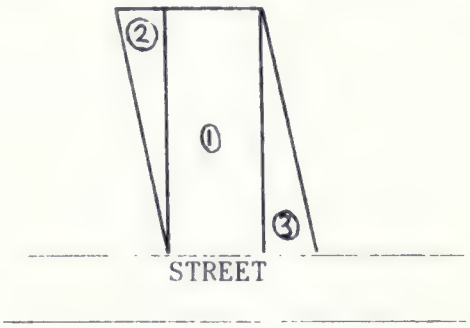
(6)



Segment 1 can be measured as shown in figure (2) and segment 2 can be measured as shown in figure (3). The result would be the same. However, rectangular measurement is obviously simpler and would be used.

Parallelograms also could be segmented as shown in figure (7), but this is n necessary.

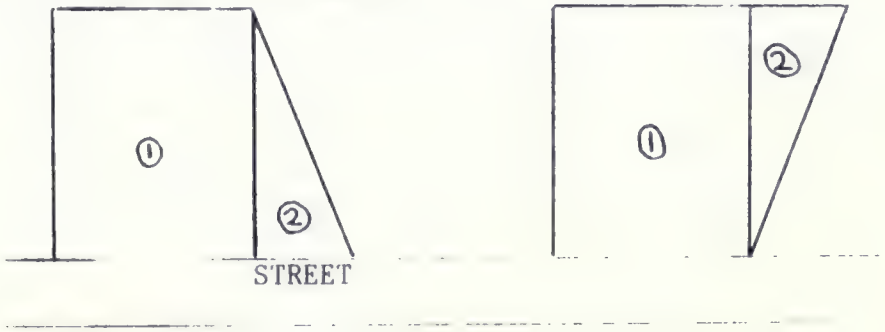
(7)



Segment 1 can be measured as a rectangle and segments 2 and 3 as right triangles.

Trapezoids where the parallel sides are parallel to the street must be segmented. Figures (8) and (9) illustrate their segmentation.

(8)



(9)

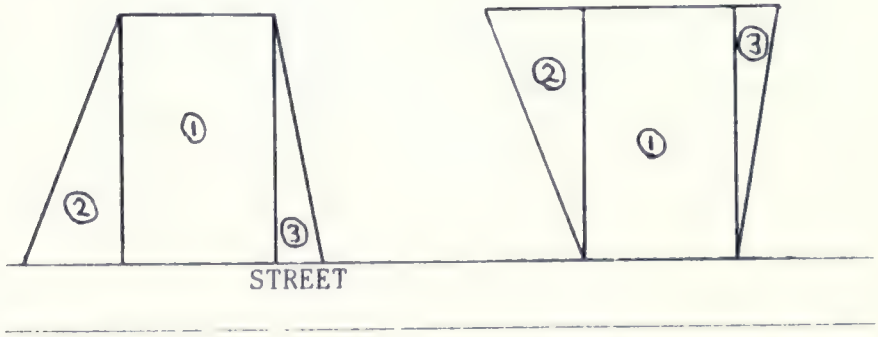
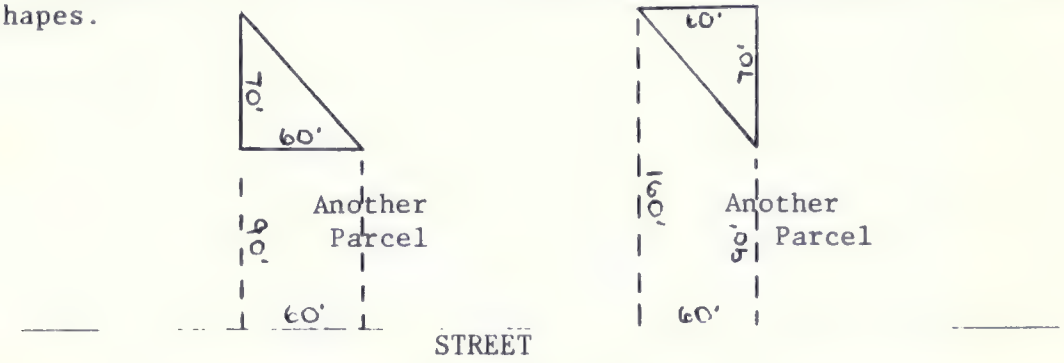


Figure (10) illustrates the segmentation of triangles, other than the right triangles shown in figures (2) and (3), which can be segmented into other triangles each of which has a side parallel to the street.

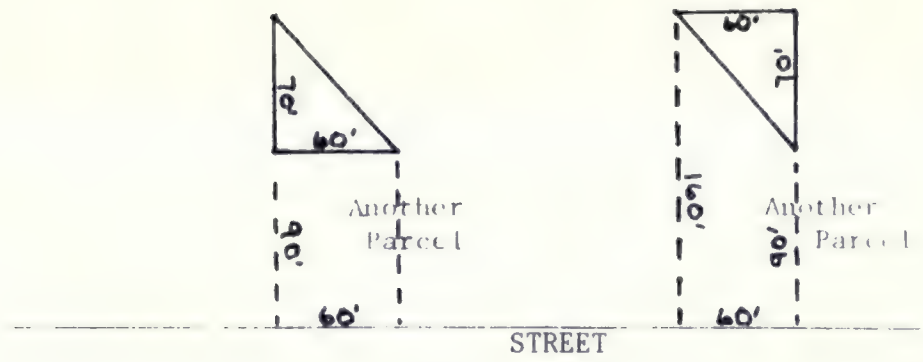
(10)

Parcels (or segments) which do not directly front on a street, but which are near to a fronting street, are termed "backlots". If they otherwise meet the criteria established above for orthogonal polygons, front foot measure can be applied. The additional factor needed is their "setback" from the fronting street in feet. Figures (11) and (12) illustrate the setback measure for each of the basic shapes.

(11)



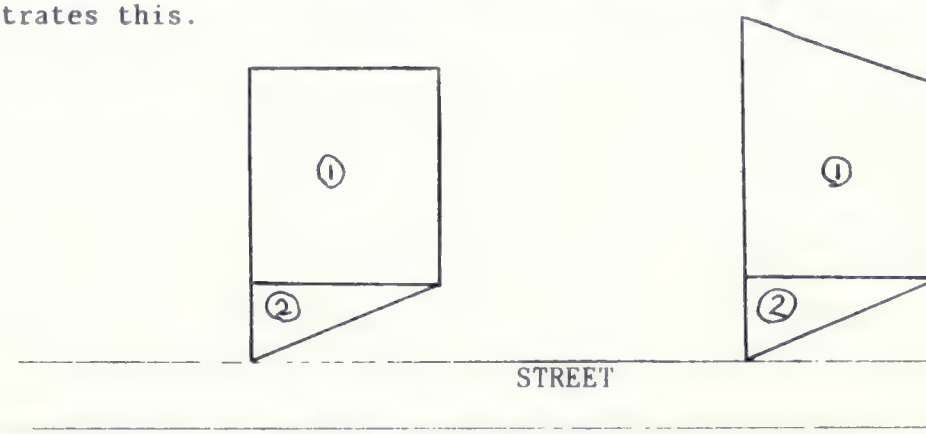
(12)



In each case, the backlot setback is 90 feet. All other measures are taken as discussed for fronting parcels.

Now the remaining trapezoids with parallel sides at right angles to the street (but only touching the street at one point) can be segmented and measured. Figure (13) illustrates this.

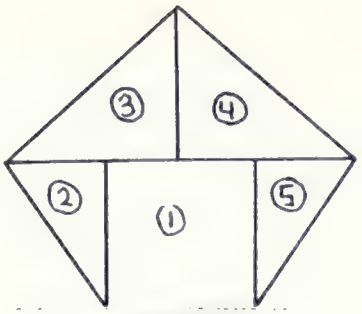
(13)



In both cases, segment 1 is measured as shown in figure 3. In the first case, the remaining rectangle is measured as a backlot. And in the second case, the remaining trapezoid is also measured as a backlot.

Segmentation can be applied to more complex orthogonal polygons. Figure (14) illustrates the segmentation of a pentagon (five-sided shape).

(14)



STREET

Segments 1, 2, and 3, are basic shapes fronting on the street. Segments 4 and 5 are basic shapes in backlots.

The experienced land enumerator using these techniques will be able to successfully measure the vast majority of residential parcels for front foot valuation.

Addendum: Obtuse triangle measurement is illustrated in figure (15).

(15)

STREET

In both cases the width is 60' and the depth is 40'. In the first case the triangular factor is "1"; in the second case it is "2".

FRONT FOOT DEPTH

Source: Property record card after land measurement

Required: For all land segments where a "1" has been entered in Item 301

Data type: Numeric

Enter the depth of the segment to the nearest foot, right-justified. See Item 302 for a discussion of segment measurement.

If a "1" has not been entered in Item 301 leave Items 302-306 blank.

Error Message: E 303-MUST BE NUMERIC IF 301=1, ZERO ASSUMED

Cause: Item 303 (Front Foot Depth) was not numeric when Unit of Measure was coded 1.

Action: Item update Front Foot Depth Action Code = 4 with the proper value.

Description: Front Foot Depth (Item 303) was not coded numeric when Front Foot was selected as the Unit of Measure. Front Foot Depth may have been key punched incorrectly or was left blank. Since Front Foot Depth must be coded in order to complete the land description and successfully generate Cost Comp. Item update Front Foot Depth Action Code = 4. If the Unit of Measure was initially coded incorrectly then you should item update the Land Data section Action Code = 4. ***Note the error message W303-NOT NUMERIC, ZEROS ASSUMED will appear immediately following the above error message. This message is provided to indicate that you must provide the Front Foot Depth.

Error Message: W 303-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 303 (Front Foot Depth) was either coded or punched incorrectly or was left blank.

Action: Item update Item 303 (Front Foot Depth) Action Code = 4, if Front Foot Depth should have been coded; otherwise no action is necessary.

Description: Item 303 (Front Foot Depth) was coded not numeric when Unit of Measure (Item 301) was coded something other than Front Foot. No action is necessary if Unit of Measure was coded correctly as 2, 3 or 4 because zero was already assumed for "Front Foot Depth". If for some reason Front Foot should have been selected as the Unit of Measure item update the Land Data section Action Code = 4.

Error Message: E 303-CANNOT = ZERO

Cause: Item 301 (Unit of Measure) was coded as 1 "Front Foot" and Item 303 (Front Foot) was coded zero. No Cost Computation value can be generated.

Action: Item update Front Foot Depth Action Code = 4.

Description: The system found that Front Foot Depth was coded as zero when the Unit of Measure selected was Front Foot. When Front Foot is selected as a Unit of Measure all Front Foot data items must be coded. No cost computations sheets can be printed until the Front Foot Depth is item updated. Item update Front Foot Depth Action Code = 4.

Error Message: W 303-MUST BE ZEROS WHEN UNIT MEASURE NOT = 1, ZEROS ASSUMED

Cause: Front Foot Depth was coded greater than zeros when Unit of Measure was not coded Front Foot.

Action: No action is necessary if the Unit of Measure is correctly coded. Zeros were assumed for Front Foot Depth.

Description: The system found that Front Foot Depth was coded greater than zeros indicating a Front Foot Depth was present. The Unit of Measure was not coded as Front Foot, therefore, no Front Foot data items can be coded. The system assumed zeros for Front Foot Depth so if you coded your Unit of Measure correct no action is necessary. If you incorrectly coded Item 301 (Unit of Measure) then item update the Land Data section Action Code = 4.

FRONT FOOT BACKLOT SETBACK

Source: Property record card after land measurement

Required: For all land segments where a "1" has been entered in Item [illegible].

Data type: Numeric

Enter the setback of a backlot segment to the nearest foot, right-justified. See Item 302 for a discussion of segment measurement.

If the segment is not set back, enter "0".

If a "1" has not been entered in Item 301 leave Items 302-306 blank.

Error Printout Explanation:

Error Message: W 304-MUST BE NUMERIC IF 301 = 1, ZEROS ASSUMED

Cause: Item 304 (Backlot Setback) was not coded numeric when Unit of Measure was coded Front Foot.

Action: Item update Item 304 (Backlot Setback) Action Code = 4, if the zero assumed value is not valid.

Description: The system found that the Backlot Setback was coded something other than numeric when Unit of Measure was coded 1 (Front Foot). In order for the Land Data section to be properly described and a value determined, Backlot Setback must be coded. In this instance the system assumed a value of zero for Backlot Setback. If zero is correct no action is necessary since zeros were assumed. If zero was not a correct assumption then item update Backlot Setback Action Code = 4.

Error Message: W 304- NOT NUMERIC, ZEROS ASSUMED

Cause: Backlot Setback (Item 304) was not coded or was coded non-numeric.

Action: No action is necessary if the assumed value of zero is valid, otherwise Item update Action Code = 4.

Description: Item 304 (Backlot Setback) was coded or punched with a non-numeric value. Unit of Measure is coded something other than "Front Foot" so the Backlot Setback should have been coded zero. No action is necessary if Backlot Setback was accurately assumed zero. If Unit of Measure is incorrectly coded and should be 1 then item update the Land Data section Action Code = 4.

Error Message: W 304-MUST BE ZERO WHEN UNIT MEASURE NOT = 1, ZEROS ASSUMED

Cause: Backlot Setback (Item 304) was coded greater than zeros and Item 301 (Unit of Measure) was coded greater than 1.

Action: No action is necessary since zeros were assumed.

Description: Unit of Measure was coded 2, 3, or 4 and a Front Foot data item "Backlot Setback" was coded. Since Backlot Setback can only be coded when Unit of Measure is equal to 1, Backlot Setback was assumed to be zeros. The system could only assume zeros because it is not sure which Item is in error Unit of Measure or Backlot Setback. If Unit of Measure is incorrect and Backlot Setback should have been coded, then item update the Land Data section Action Code = 4.

FRONT FOOT TRIANGULAR FACTOR

Source: Property record card after land measurement

Required: For all land segments where a "1" has been entered in Item

Data type: Coded

Enter a "0" if the land segment is not triangular in shape. Enter a "1" if it is triangular in shape and the apex of the triangle points towards the street. Enter "2" if it is triangular in shape and the apex of the triangle points away from the street. See Item 302 for a discussion of segment measurement.

If a "1" has not been entered in Item 301 code a zero in the column.

Error Printout Explanation:

Error Message: W 305-MUST BE NUMERIC IF 301 = 1, ZEROS ASSUMED

Cause: Item 305 (Triangular Factor) was not numeric when Unit of Measure was equal to Front Foot.

Action: Item update Triangular Factor Action Code = 4.

Description: The system encountered a non-numeric value coded in Item 305 (Triangular Factor). Unit of Measure (Item 301) was coded 1 which requires that a response of 0, 1, or 2 be provided for Triangular Factor. In order to accurately describe the Land Data or generate a Cost Computation the system needs the Triangular Factor. In this case the system assumed that the triangular factor was zero. If zero is a correct assumption then no action is necessary. If zero is not a valid response then item update Triangular Factor Action Code = 4.

Error Message: W 305-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 305 (Triangular Factor) was not coded zero when Unit of Measure was not equal to 1.

Action: No action is necessary, zero was assumed.

Description: Item 305 (Triangular Factor) was checked and found to be non-numeric. The Unit of Measure was checked and it was found to be coded something other than 1 (Front Foot). In this case Triangular Factor should have been coded a zero since it did not apply to Unit of Measure. No action is necessary since zeros were assumed. If you incorrectly specified the Unit of Measure then item update Item 301 (Unit of Measure) Action Code = 4.

Error Message: W 305-OUT OF RANGE, ZEROS ASSUMED

Cause: Item 305 (Triangular Factor) was coded or punched with a value less than 0 or greater than 2.

Action: Item update Action Code = 4 if the zero assumed value is not correct.

Description: The system encountered a value that was not between the valid range from 0-2 for Triangular Factor. Either the value was coded or punched incorrectly. If the zero assumed value was not correct submit an Item Update Form Action Code = 4. If zero is correct no action is necessary.

Error Message: W 305-MUST BE ZEROS WHEN UNIT MEASURE NOT = 1, ZERO IS ASSUMED

Cause: Item 305 was coded greater than zero and Unit of Measure was not equal to Front Foot.

Action: No action is necessary if the assumed value of zero is correct. If zero is not correct item update Action Code = 4.

Description: The system found that a Front Foot Data item Triangular Factor had been coded when the Unit of Measure was not equal to Front Foot. The system assumed that Unit of Measure had been correctly coded and assumed a value of zero for Triangular Factor. If zero is not a valid assumption then item update Item 305 (Triangular Factor) Action Code = 4. If Unit of Measure was incorrectly coded then item update the Land Data Section Action Code = 4.

FRONT FOOT STANDARD DEPTH

Source: Property record card after land measurement

Required: For all land segments where a "1" has been entered in Item 301

Data type: Numeric

Enter the standard depth applicable to the segment in feet, right-justified. See Item 302 for a discussion of segment measurement.

If a "1" has not been entered in Item 301 code a zero.

Error Printout Explanation:

Error Message: E 306-MUST BE NUMERIC IF 301 = 1, ZERO ASSUMED

Cause: Item 306 (Standard Depth) was coded or punched as non-numeric (blank) while Unit of Measure was coded 1.

Action: Item update Item 306 (Standard Depth) Action Code = 4.

Description: Since the Unit of Measure was coded Front Foot, all Front Foot Data items must be coded. The system encountered a non-numeric value in Item 306 (Standard Depth). Since the system had no means of determining standard depth it assumed a value of zero. In order to complete the Land Data Section correctly and generate a cost computation sheet you should item update Item 306 Action Code = 4. ***Note: The error message E 306-CANNOT=ZEROS will immediately follow this error message to indicate that you must item update the parcel.

Error Message: W 306-NOT NUMERIC, ZEROS ASSUMED

Cause: Front Foot was not selected as the Unit of Measure for this parcel and Standard Depth (Item 306) was coded non-numeric.

Action: No action is necessary, zeros were assumed.

Description: Item 306 (Standard Depth) was coded or punched with a non-numeric value. The Unit of Measure selected was not Front Foot. In this case, Item 306 (Standard Depth) should have been coded zero but was either punched or coded incorrectly. Since the system knew that Standard Depth should be coded zero it assumed zero. If your Unit of Measure was originally coded incorrectly item update Action Code = 4 the Land Data Section. If the zero assumption is correct no action is necessary.

Error Message: E 306-CANNOT = ZEROS

Cause: Unit of Measure is coded Front Foot (1) and Standard Depth is coded zeros.

Action: Item update Standard Depth Action Code = 4.

Description: Unit of Measure was coded Front Foot (1) requiring that all Front Foot Data items must be coded. Standard Depth was coded zeros which is not a valid response. A valid Cost Computation sheet cannot be generated unless Standard Depth is provided. Item update Standard Depth Action Code = 4.

Error Message: W 306-MUST BE ZEROS WHEN UNIT MEASURE NOT = 1, ZEROS ASSUMED

Cause: Unit of Measure was not coded Front Foot while Standard Depth a Front Foot Data item was coded greater than zeros.

Action: No action is necessary since zeros were assumed.

Description: The Unit of Measure was coded something other than (1) Front Foot, so no Front Foot Data items should be coded. In this case, Standard Depth was coded numeric and greater than zeros which is invalid since Unit of Measure was coded greater than 1. ***Note: Assumptions will not be made when item updating a parcel.

SQUARE FOOT AREA

Source: Property record card after land measurement

Required: For all land segments where a "2" has been entered in Item 301

Data type: Numeric

Enter the Square Foot area of the segment to the nearest square foot, right-justified.

If a "2" has not been entered in Item 301 code a zero.

Error Printout Explanation:

Error Message: E 307-MUST BE NUMERIC WHEN 301 = 2, ZERO ASSUMED

Cause: Unit of Measure was coded (2) Square Foot and the square foot area was not provided.

Action: Item update Item 307 Action Code = 4 with the total square foot area to the nearest square foot.

Description: A 2 was coded in the Unit of Measure (Item 301) indicating that the land will be measured in square feet. No square foot area was coded in Total Square Foot Area. No Cost Computation can be completed until you provide the square foot area. Provide the Square Foot Area by item updating Action Code = 4. ***Note: The message E 307-CANNOT=ZEROS will appear after the message above indicating that Square Foot Area must be provided.

Error Message: W 307-NOT NUMERIC, ZEROS ASSUMED

Cause: Square Foot Area (Item 307) was coded non-numeric.

Action: No action is necessary if the zero assumed value is correct. If zeros are not correct, item update Action Code = 4.

Description: The Unit of Measure selected was not Square Foot and the Square Foot Area (Item 307) was coded or punched with a non-numeric value. Since the Square Foot Area should not be coded when Unit of Measure is not equal to (2), zeros were assumed. No action should be necessary unless the Unit of Measure was originally coded incorrectly.

Error Message: E 307-CANNOT = ZEROS

Cause: Unit of Measure (Item 301) was coded (2) Square Foot and Square Foot Area (Item 307) was coded or punched with zeros.

Action: Item update Square Foot Area Action Code = 4 with the proper square foot area.

Description: The Unit of Measure selected was Square Foot (2) but the Total Square Foot Area was not provided. No Cost Computations can be generated since this information is missing. The system had assumed zeros in an earlier error message or zeros were coded by the enumerator. You should provide the proper square foot area or change your Unit of Measure with an Item Update Form Action Code = 4, to resolve this error.

Error message: W 307-MUST BE ZEROS WHEN UNIT MEASURE NOT = 2, ZEROS ASSUMED

Cause: Item 307 (Square Foot Area) was coded numeric and greater than zeros when Unit of Measure (Item 301) was not coded (2) Square Foot.

Action: No action is necessary since zeros were assumed by the system. If Unit of Measure was coded incorrectly item update the Land Data Section Action Code = 4.

Description: A valid value was coded for Square Foot Area but the Unit of Measure selected was not Square Foot. Since Square Foot was not selected as the Unit of Measure, zeros were assumed for Square Foot Area. If the Unit of Measure was correctly coded, no action is necessary. If Unit of Measure is not coded correctly item update the Land Data Section Action Code = 4.

ACRE AREA

Source: Property record card after land measurement

Required: For all land segments where a "3" has been entered in Item 301

Data type: Numeric

Enter the acre area of the segment to the nearest one-thousandth of an acre, aligned to the decimal point. If the area is in even acres, enter "000" after the decimal point. Please note: This decimal point may be missing from the form and should be added at the third tick mark in the Acres Coding section.

If a "3" has not been entered in Item 301 code a zero.

Error Printout Explanation:

Error Message: E 308-NOT NUMERIC WHEN UNIT MEASURE = 3, ZERO ASSUMED

Cause: A non-numeric value was coded in Item 308 (Acre Area) when Unit of Measure was coded (3) Acre.

Action: Item update Acre Area (Item 308) with an Item Update Form Action Code = 4.

Description: You selected Acre as the Unit of Measure for the Land Data Section but the system encountered non-numeric (invalid) data in Acre Area (Item 308). The system assumed a value of zeros; since it could not approximate a value for you. You should item update the Acre Area Action Code = 4, with the proper acre area. ***Note: The error message E 308-CANNOT=ZEROS will appear following the above error message. This message is provided to indicate that zeros are not a valid response when Acre is the Unit of Measure. No Cost computation can be accurately generated until you item update Acre Area or the Land Data Section.

Error Message: W 308-NON-NUMERIC, ZEROS ASSUMED

Cause: Item 308 (Acre Area) was coded or punched non-numeric when Unit of Measure was not coded (3) Acre.

Action: No action is necessary, zeros were assumed.

Description: The system encountered non-numeric data in Item 308 (Acre Area) when the Unit of Measure was not coded (3) Acre. The system assumed a value of zeros. Since Acre Area should have been zeros when the Unit of Measure was not equal to zeros. No action is necessary unless the Unit of Measure was incorrectly coded. If Unit of Measure is incorrect then item update Action Code = 4.

Error Message: E 308-CANNOT = ZEROS

Cause: Unit of Measure was coded (3) Acre and no Acre Area (Item 308) was provided.

Action: Item update Acre Area Action Code = 4.

Description: The system encountered zeros in (Item 308) Acre Area when the Unit of Measure selected was Acre. In order to generate a Cost Computation and successfully value the parcel you should item update the parcel Action Code = 4. The zeros that were coded in (308) Acre Area were either provided by the enumerator or were assumed by the system in an earlier error message.

Error Message: W 308-MUST BE ZEROS WHEN UNIT MEASURE NOT = 3, ZEROS ASSUMED

Cause: Unit of Measure is not (3) Acre and valid data has been coded in Item 308 (Acre Area).

Action: No action is necessary since the system assumed zeros. If the Unit of Measure was incorrectly specified item update the Land Data section Action Code = 4.

Desciption: The system encountered valid data in Item 308 (Acre Area) when the Unit of Measure was not coded Acre (3). The system assumed a value of zeros for Acre Area. If the assumed value is not correct or the Unit of Measure was not correctly coded. Item update the Land Data section Action Code = 4.

UNIT VALUE

Source: Property record card after land measurement

Required: For all land segments where a 1, 2, or 3 has been entered in Item 301

Data type: Numeric

Enter the Unit Value (value per parcel) of the segment in dollars, right-justified.

If a 0 or 4 has been entered in Item 301 code a zero.

Error Printout Explanation:

Error Message: E 309-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 309 (Unit Value) was coded blank or non-numeric when Unit of Measure was coded Front Foot, Square Foot or Acre.

Action: Item update Item 309 (Unit Value) Action Code = 4 with the proper value per unit depending on what Unit of Measure was selected in Item 301.

Description: You selected a Unit of Measure of Front Foot, Square Foot, or Acre but did not provide a value to apply to the unit. You should specify a cost per front foot, square foot or acre based upon the land values that have been set for the area the parcel is located in. In order to provide the Unit Value information item update Item 309 (Unit of Measure) Action Code = 4. ***Note: The error message E 309-CANNOT EQUAL ZEROS will follow the above error message. This message is provided to inform you that Unit Value must be coded before a Cost Computation can be generated.

Error Message: W 309-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 309 (Unit Value) was coded or punched with a non-numeric value when Unit of Measure was coded 4, or 0.

Action: No action is necessary, zeros were assumed.

Description: The system encountered non-numeric values in Item 304 (Unit Value). Either the item was coded or punched with a blank or some other non-numeric variable. Since Unit of Measure was coded (0) none or (4) Site, no data other than zeros should have been coded in Unit Value. The system assumed zeros for Unit Value so no action is necessary unless the Unit of Measure was incorrectly specified.

Error Message: E 309-CANNOT = ZEROS

Cause: Item 309 (Unit Value) cannot equal zeros when Unit of Measure is coded 1, 2, or 3.

Action: Item update (Unit Value) Item 309 Action Code = 4 with the proper value.

Description: The system encountered zeros in (Unit Value) Item 309 when Unit of Measure was equal to (1) Front Foot, (2) Square Foot or (3) Acre. No Cost Computation can take place until a value is provided for Item 309 (Unit Value). The zeros that the system encountered were either punched, coded by the enumerator or assumed by an earlier error message. Item update Item 309 (Unit Value) Action Code = 4 with the correct information or change the Land Data Section if it is in error.

Error Message: W 309-MUST BE ZEROS WHEN UNIT MEASURE NOT EQUAL 3, ZEROS ASSUMED.

Cause: Item 309 (Unit Value) was coded greater than zeros when Unit of Measure was equal to Site.

Action: No action is necessary zeros were assumed.

Description: The system encountered coded data in Item 309 (Unit Value) when the Unit of Measure was coded (4) Site. When Site has been specified as a Unit of Measure the Site Value must be coded (Item 310). Unit Value cannot be specified when Site is the Unit of Measure. You should check to ensure that you correctly specififed the Unit of Measure and that it was punched correctly. No action is necessary if the assumed value of zeros was correct for Unit Value. If the assumed value is incorrect item update the Land Data section Action Code = 4.

SITE VALUE

Source: Property record card after land measurement

Required: For all land segments where a "4" has been entered in Item 301

Data type: Numeric

Enter the Site Value (Flat Value) of the segment in dollars, right-justified.

If a "4" has not been entered in Item 301 code a zero.

Error Printout Explanation:

Error Message: E 310-MUST BE CODED WHEN UNIT MEASURE = 4, ZERO ASSUMED

Cause: Item 310 (Site Value) was coded not numeric when Unit of Measure (Item 301) was coded (4) Site.

Action: Item update Site Value Action Code = 4.

Description: The system encountered non-numeric data in Item 310 (Site Value) when the Unit of Measure was coded (4) Site. No Cost Computation can be generated until the proper information is provided for Site Value. Item update Site Value Action Code = 4 with the proper value for site. If the Unit of Measure was incorrectly specified then item update the Land Data section Action Code = 4. ***Note: The error message E 310-CANNOT = ZEROS will be printed after the above message. This is to inform you that (310) Site Value must be coded in order for Cost Computation to take place.

Error Message: W 310-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 310 (Site Value) was punched or coded non-numeric when Item 301 was not coded equal to (4) Site.

Action: No action is necessary, zeros were assumed.

Description: The system encountered non-numeric data in Item 310 (Site Value). Since site was not selected as the Unit of Measurement the system assumed zeros for site value. No action is necessary if zeros are correct for site value, otherwise item update the Land Data section Action Code = 4.

Error Message: E 310-CANNOT = ZEROS

Cause: The Unit of Measure (Item 301) is equal to (4) Site and Item 310 (Site Value) is equal to zeros.

Action: Item update Site Value Action Code = 4 with the correct Site Value.

Description: The system encountered zeros in Item 310 (Site Value) when the Unit of Measure (Item 301) was equal to Site. No Cost Computation can be generated until a site value is provided. The zeros in Site Value were either coded, punched or were assumed by an earlier error message. Item update Site Value Action Code = 4 with the correct site value in order to generate Cost Computation. If the Unit of Measure was incorrectly specified then item update the Land Data Section Action Code = 4.

Error Message: W 310-MUST BE ZEROS WHEN UNIT MEASURE NOT = 4, ZEROS ASSUMED

Cause: Unit of Measure (Item 301) was not coded equal to (4) Site and Site Value (Item 310) was coded greater than zero.

Action: No action is necessary, zeros were assumed.

Description: The system encountered numeric data greater than zeros when it edited Site Value. Item 301 (Unit of Measure) is not coded equal to (4) Site. No Site Value should be coded when Site is not the Unit of Measurement. No action is necessary if the assumed value of zeros is correct. If the Unit of Measure was incorrectly specified then item update the Land Data section Action Code = 4.

STREET SURFACE

Source: Property record card, exterior inspection, questionnaire

Required: For all parcels, sheet one (trailing sheets optional)

Data type: Coded

Enter a "1" if the fronting street is paved (concrete, asphalt, blacktop, etc.). Enter a "2" if the street is oiled only. Enter a "3" if the surface is graveled. Enter a "4" if the street is dirt (unsurfaced native soil).

Error Printout Explanation:

Error Message: W 311-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: On sheet one of a parcel, the street surface was coded with a non-numeric value.

Action: Item update Item 311 (Street Surface) Action Code = 4, if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 311 (Street Surface). Street Surface must be coded on sheet one of all parcels. The system assumed that the Street Surface is paved. If the assumption is not correct item update the parcel Action Code = 4.

Error Message: W 311-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 311 (Street Surface) was coded not numeric on a trailing sheet.

Action: No action is necessary.

Descripition: The system encountered a non-numeric value in Item 311 (Street Surface). The value appears on a trailing sheet so no action is necessary. If you wanted Street Surface coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Street Surface on trailing sheets is optional. A value of zero was assumed for Street Surface.

Error Message: W 311 - OUT OF RANGE, 1 ASSUMED

Cause: Street surface was coded greater than 4

Action: Item update Action Code = 4 if the assumed value (paved) 1 is not accurate.

Description: The system encountered a number greater than 4 for Street Surface. The valid range for Street Surface is 0-4. Since a value outside of this range was coded an assumed value of Paved was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

WATER SOURCE

Source: Property record card, exterior inspection, questionnaire

Required: For all parcels, sheet one (trailing sheets optional)

Data type: Coded

Enter a "0" if no water supply is available to the parcel. Enter a "1" if the water supply is from a private well and no other supply is available. Enter a "2" if the water is provided by a privately owned community water system, and no public supply is available. Enter a "3" if the parcel is served by a municipal or water district system.

Error Printout Explanation:

Error Message: W 312-BLANK OR NON-NUMERIC, 3 ASSUMED

Cause: On sheet one of a parcel the Water Source was coded with a non-numeric value.

Action: Item update Item 312 (Water Source) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 312 (Water Source). Water Source must be coded on sheet one of all parcels. The system assumed that the Water Source is Public (3). If the assumed value is not correct item update the Parcel Action Code = 4.

Error Message: W 312-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 312 (Water Source) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 312 (Water Source). The value appears on a trailing sheet so no action is necessary. If you wanted Water Source coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Water Source on trailing sheets is optional. A value of "zero" or "none" was assumed for Water Source.

Error Message: W 312-OUT OF RANGE, 3 ASSUMED

Cause: Item 312 (Water Source) was coded greater than 3.

Action: Item update Action Code = 4 if the assumed value of Public (3) is not accurate.

Description: The system encountered a number greater than 3 for Water Source. The valid range for Water Source is 0 - 3. Since a value outside of this range was coded, an assumed value of (3) Public was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

Source: Property record card, exterior inspection, questionnaire

Required: For all parcels, on sheet one, (trailing sheets optional)

Data type: Coded

Enter "0" if sewers are not available. Enter "1" if sanitary sewers are available, even though the parcel is not connected. Enter "2" if the parcel has a septic system in use.

Error Printout Explanation:

Error Message: W 313-BLANK OR NON-NUMERIC; 1 ASSUMED

Cause: On sheet (1) of a parcel, Sewer was coded with a non-numeric value.

Action: Item update Item 313 (Sewer) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 313 (Sewer). Sewer must be coded on sheet one of all parcels. The system assumed that the Sewer Type is Sanitary. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 313 - BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 313 (Sewer) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 313 (Sewer). The value appears on a trailing sheet so no action is necessary. If you wanted Sewer Type coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Sewer on trailing sheets is optional. A value of zero was assumed indicating no sewer was present.

Error Message: W 313 - OUT OF RANGE, 1 ASSUMED

Cause: Sewer was coded greater than 2

Action: Item update Action Code = 4 if the assumed value of Sanitary (1) is not accurate.

Description: The system encountered a number greater than 2 for Sewer. The valid range for Sewer is 0 - 2. Since a value outside of this range was coded an assumed value of Sanitary was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

VIEW LOT

Source: Exterior inspection

Required: For all parcels

Data type: Coded

If the parcel has no view, (i.e., nothing to look at except other houses on the same eye level or generally flat terrain), enter a "0". Enter a "1" for a limited view and "2" for an expansive view.

Error Printout Explanation:

Error Message: W 314-BLANK OR NON-NUMERIC; ZERO ASSUMED

Cause: On sheet (1) of a parcel the View Lot was coded with a non-numeric value.

Action: Item update Item 314 (View Lot) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 314 (View Lot). View Lot must be coded on sheet one of all parcels. The system assumed that the View Lot Type is "None". If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 314 - BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 314 (View Lot) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 314 (View Lot). The value appears on a trailing sheet so no action is necessary. If you wanted View Lot coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for View Lot on trailing sheets is optional. A value of zero was assumed indicating no View Lot was present.

Error Message: W 314 - OUT OF RANGE, ZERO ASSUMED

Cause: View Lot was coded greater than 2

Action: Item update Action Code = 4 if the assumed value of "None" (0) is not accurate.

Description: The system encountered a number greater than 2 for View Lot. The valid range for View Lot is 0 - 2. Since a value outside of this range was coded, an assumed value of "None" was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update action code = 4.

ZONING

Source: Zoning maps

Required: For all parcels

Data type: Coded

This item refers to the basic zoning of the parcel, not to specific limitations regarding square footage, setbacks, or permitted non-conforming uses. Due to the differences in zoning codes under different jurisdictions, nine generalized and uniform categories are to be applied for this item. They are:

0 Unzoned; includes all so called "holding zones", if any.
1 All single family residential zonings regardless of specific limitations.
2 All zonings limiting multiple dwellings to duplex or triplex usage.
3 All multiple residential zonings (aside from duplex and triplex) containing controls as to density and height limitations.
4 All multiple residential high rise zonings.
5 All neighborhood or strip type limited commercial zonings.
6 All other commercial zonings.
7 All manufacturing and industrial zonings.
8 All agricultural zonings.
9 Uses which do not necessarily fall within one of the above zonings, but are such that they are only allowed under "special use permits", or by other permission specifically applicable to the particular parcel and its use.

Determine the most appropriate category for the zone in which the parcel is located and enter the corresponding number.

Error Message: W 315-BLANK OR NON-NUMERIC; 1 ASSUMED

Cause: On sheet (1) of a parcel the Zoning Code was coded with a non-numeric value.

Action: Item update Item 315 (Zoning) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 315 (Zoning). Zoning must be coded on sheet one of all parcels. The system assumed that the Zoning is Single Family. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 315 - BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 315 Zoning was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 315 (Zoning). The value appears on a trailing sheet so no action is necessary. If you wanted Zoning coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Zoning on trailing sheets is optional. A value of zero was assumed for Zoning on the trailing sheet.

BUILDING CODE RESTRICTIONS

Source: Zoning maps

Required: For all parcels

Data type: Coded

Enter a "0" if lack of restrictions have resulted in unbalanced and uncontrolled development, or are likely to. Enter a "1" where restrictions have resulted or are likely to result in an overall acceptable development considering the age and class of structures. Enter a "2" where restrictions are so extensive, limiting and strict as to result in a better than average area development.

Error Printout Explanation:

Error Message: W 316-BLANK OR NON-NUMERIC; 1 ASSUMED

Cause: On sheet (1) of a parcel, Item 316 (Building Code Restrictions) was coded with a non-numeric value.

Action: Item update Item 316 (Building Code Restrictions) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 316 (Building Code Restrictions). Building Code Restrictions must be coded on sheet one of all parcels. The system assumed that the restrictions are adequate. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 316 - BLANK OR NON-NUMERIC, 0 (NONE) ASSUMED

Cause: Item 316 (Building Code Restrictions) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 316 (Building Code Restrictions). The value appears on a trailing sheet so no action is necessary. If you wanted Building Code Restrictions coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for building restrictions on trailing sheets is optional. A value of none was assumed for Building Code Restrictions.

Error Message: W 316 - OUT OF RANGE, 1 (ADEQUATE) ASSUMED

Cause: Building Code Restrictions was coded greater than 2

Action: Item update Action Code = 4 if the assumed value of Adequate (1) is not accurate.

Description: The system encountered a number greater than 2 for Building Code Restrictions. The valid range for Building Code Restrictions is 0 - 2. Since a value outside of this range was coded, an assumed value of 1(adequate) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

NEIGHBORHOOD PREDOMINANT USE

Source: Exterior inspection or questionnaire

Required: For all parcels

Data type: Coded

Enter a "1" if the parcel is located in an area of predominantly single family residences. Enter a "2" if the parcel is located in an area of predominantly multifamily residences (duplex, triplex, multi-unit apartments). Enter a "3" if the parcel is located in an agricultural (farm, forest, etc.) area, isolated from any significant neighbornood. Enter a "4" if the parcel is located in an area interspersed with single family, multifamily, commercial, industrial and/or public improvement uses. Note this item should be consistent with item 207 property type.

Error Printout Explanation:

Error Message: W 317-BLANK OR NON-NUMERIC; ITEM 207 (PROPERTY TYPE) ASSUMED

Cause: On sheet (1) of a parcel the Neighborhood Predominant Use was coded with a non-numeric value.

Action: Item update Item 317 (Neighborhood Predominant Use) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 317 (Neighborhood Predominant Use). Neighborhood Predominant Use must be coded on sheet one of all parcels. The system assumed that the Predominant Use is the same as Property Type (Item 207). Check your worksheet to see what value was assumed. If the assumed value is not correct item update the parcel action code = 4.

Error Message: W 317 - BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 317 (Neighborhood Predominant Use) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 317 (Neighborhood Predominant Use). The value appears on a trailing sheet so no action is necessary. If you wanted Neighborhood Predominant Use coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Neighborhood Predominant Use on trailing sheets is optional. A value of zero was assumed for Neighborhood Predominant Use.

Error Message: W 317 - OUT OF RANGE, PROPERTY TYPE ASSUMED

Cause: Neighborhood Predominant Use was coded greater than 4

Action: Item update Action Code = 4 if the assumed value of what you coded in Item 207 for Property Type is not accurate.

Description: The system encountered a number greater than 4 for Neighborhood Predominant Use. The valid range for Neighborhood Predominant Use is 1 - 4. Since a value outside of this range was coded, the same value as that coded for Property Type was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

NEIGHBORHOOD TREND

Source: Neighborhood inspection

Required: For all parcels

Data type: Numeric

Enter a "1" if the neighborhood is on the downgrade, showing considerable evidence of deterioration in buildings, land usage, etc. Enter a "2" if the neighborhood is stable, showing evidence of good maintenance, with land usages remaining in well balanced conformity. Enter a "3" if the neighborhood is on the uptrend, with remodeling or razing of outmoded structures, land usages being upgraded, new construction, etc..

Error Printout Explanation:

Error Message: W 318-BLANK OR NON-NUMERIC; 2 ASSUMED

Cause: On sheet (1) of a parcel the Neighborhood Trend was coded with a non-numeric value.

Action: Item update Item 318 (Neighborhood Trend) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 318 (Neighborhood Trend). Neighborhood Trend must be coded on sheet one of all parcels. The system assumed that the Neighborhood is Stable. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 318 - BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 318 (Neighborhood Trend) was coded non-numeric on a trailing sheet.

Action: No action is necessary

Description: The system encountered a non-numeric value in Item 318 (Neighborhood Trend). The value appears on a trailing sheet so no action is necessary. If you wanted Neighborhood Trend coded on the trailing sheet you should item update the trailing sheet Action Code = 4. Coding for Neighborhood Trend on trailing sheets is optional. A value of zero was assumed for Neighborhood Trend.

Error Message: W 318 - OUT OF RANGE, 2 ASSUMED

Cause: Neighborhood Trend was coded greater than 3

Action: Item update Action Code = 4 if the assumed value of Stable (2) is not accurate.

Description: The system encountered a number greater than 3 for Neighborhood Trend. The valid range for Neighborhood Trend is 1 - 3. Since a value outside of this range was coded, an assumed value of Stable (2) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

TOTAL PROPERTY DATA ITEMS

PART VII

401.1

LOCAL INDEX

Source: Property record card

Required: For all parcels, on sheet 01 only

Data type: Numeric

Local index is defined as extraordinary economic obsolescence that impacts all property located in a specific neighborhood, community, or geographic area. Enter the local index applicable to the parcel in whole percent, right-justified. Local indexes attempt to correct for the difference between replacement cost less normal depreciation and market value as they may differ from locality to locality.

Error Printout Explanation:

Error Message: W-401 MUST BE ZERO FOR SHEETS GREATER THAN 01; ZEROES ASSUMED

Cause: Data was coded in Local Index (Item 401) on a trailing sheet. This is not allowed.

Action: No action is necessary, zeroes were assumed

Description: Item 401 (Local Index) applies to the total property. Since total property data is only coded on sheet one, the system assumes zeroes for Local Index on all trailing sheets. All cost computations based upon Local Index will be based upon the Local Index listed on sheet one. Also since the Local Index is tied to a specific location (key data) and all trailing sheets must have the same key data and general location, there would be no need for a second Local Index.

Error Message: W 401 - BLANK OR NON-NUMERIC, 100% ASSUMED

Cause: On sheet (1) of a parcel the Local Index was coded with a non-numeric value.

Action: Item update Item 401 (Local Index) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 401 (Local Index). Local Index must be coded on sheet one of all parcels. The system assumed that the Local Index is 100%. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 401 - CANNOT BE LESS THAN 50 OR GREATER THAN 125

Cause: The Local Index (Item 401) was coded with a value less than 50% or greater than 125% on sheet one of a parcel.

Action Code: Item update Action Code = 4 Item 401 (Local Index).

Description: Local Index has a valid range from 50% to 125%. You have coded a value which exceeds that range. Any value that is generated for this parcel will not be reliable and should be closely examined. You should double check your Local Index and determine whether or not it is accurate. If the value coded is in error Item update Local Index Action Code = 4.

PRINCIPAL BUILDINGS

Source: Property record card

Required: For all parcels, on sheet 01 only

Data type: Numeric

Enter the number of principal buildings on the parcel on sheet 01 only. If none (only land and possible accessory improvements), enter "0", and leave the columns for all Items 501 through 560 on all sheets blank.

Error Printout Explanation:

Error Message W 402-MUST BE ZERO FOR SHEETS GREATER THAN 01; ZEROES ASSUMED

Cause: Data was coded in Principal Buildings (Item 401) on a trailing sheet. This is not allowed.

Action: No action is necessary, zeroes were assumed.

Description: Item 402 (Principal Building) applies only to the total property. Since total property data is only coded on sheet one, the system assumes zeroes for Principal Buildings on all trailing sheets. The information provided is total property data on sheet one of a parcel applies to all sheets within that parcel, and this must only be provided once.

Error Message: W 402-BLANK OR NOT NUMERIC, 1 ASSUMED

Cause: On sheet (1) of a parcel the Principal Buildings Item was coded with a non-numeric value.

Action: Item update Item 402 (Principal Buildings) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 402 (Principal Buildings) on sheet one of a parcel while Structure Code was coded. The system determined that since Structure Code (Item 501) was coded there must be a Principal Building. The system assumed that the number of Principal Buildings is One. If the assumed value is not correct, item update the parcel Action Code = 4.

Error Message: W 402-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 402 (Principal Buildings) was coded non-numeric on sheet one of a parcel.

Action: No action is necessary if the assumed value of zero is correct.

Description: The system encountered a non-numeric value in Item 402 (Principal Buildings). The system decided to assume zeroes since Item 501 (Structure Code) was coded blank. If you wanted Principal Buildings coded, you should item update both Item 402 (Principal Buildings) and 501 (Structure Code) and any other applicable data Action Code = 4. If all of the 500 section (Building Data) must be updated a replace Action Code = 3 would be more efficient. If the zero assumed value for Principal Buildings is correct no action is necessary.

Error Message: W 402 - NOT NUMERIC, ZEROES ASSUMED

Cause: Item 402 (Principal Buildings) was coded but the value was not numeric.

Action: Item update Principal Buildings Action Code = 4, if the zero assumed value is not correct.

Description: The system found that Principal Buildings (Item 402) was coded with a non-numeric variable. Check to see what the valid structure code is and item update Action Code = 4 if the zero assumed value is not correct.

Error Message: W 402 - CONFLICTS WITH ITEMS 501-560, 1 ASSUMED

Cause: Principal Buildings was coded zeroes while Item 501 (Structure Code) was correctly coded. This is inconsistent and the error message was generated.

Action: Item update Item 402 (Principal Buildings) or Item 501 (Structure Code) Action Code = 4, if the assumed value of 1 for Principal Buildings is not correct.

Description: The system issued this message because it felt that the information coded in Item 402 (Principal Buildings) conflicted with the information provided in Item 501 (Structure Code). If a Structure Code is provided then it would seem that the number of Principal Buildings (Item 402) should be at least 1. 1 was assumed for Principal Buildings. If the assumed value is not correct either update Principal Buildings to a number greater than 1; do nothing because the assumed value is correct; or update the Principal Buildings back to zero and correct the error in Item 501 (Structure Code), by updating Item 501 (Structure Code) to 000.

Error Message: W 402 - PRINCIPAL BUILDINGS GREATER THAN TOTAL SHEETS, EQUAL NUMBER ASSUMED

Cause: The number of Principal Buildings is greater than the number of total sheets.

Action: Item update total sheets Item 109 if the assumed value is not correct.

Description: The system found a situation where you indicated that you had more Principal Buildings than total sheets. For example, Total Sheets is 03 and Principal Buildings is 05. When this situation occurs the system automatically assumes that the same number of Principal Buildings exists as Total Sheets. In our above example the number of Principal Buildings is assumed to be the same as sheets or 03. Since this assumption is made you should be careful when changing information on this parcel. A replace should be used to change Building Data rather than a delete. If you use a delete your number of Principal Buildings may be changed and you will not be able to correct the number until you have the correct number of total sheets. By utilizing the replace feature of the system you avoid deleting the sheets and thus changing the number of Principal Buildings through the assumption process.

CONFORMANCE TO NEIGHBORHOOD

Source: Exterior inspection, Comparison to Neighborhood

Required: For all parcels

Data type: Coded

Enter a "1" if the parcel is underimproved in comparison to others in the neighborhood because of building size, age, condition, quality, land use or a combination of such factors. Enter a "2" if the building fits the neighborhood and is equal to the majority of the properties in the neighborhood (i.e., the parcel is typically improved). Enter a "3" if the parcel is overimproved in comparison to most in the neighborhood because of building size, age, quality or a combination of such factors. If an improvement is not contained on this parcel the conformance of the lot should be taken into consideration.

Error Printout Explanation:

Error Message: W 403-MUST BE ZERO FOR SHEETS GREATER THAN 01, ZEROES ASSUMED

Cause: Data was coded in Conformance to Neighborhood (Item 403) on a trailing sheet. This is not allowed.

Action: No action is necessary, zeroes were assumed

Description: Item 403 (Conformance to Neighborhood) should only be coded on sheet one of a parcel. This item is located in the Total Property Data section and thus you may only code it on the first sheet. All trailing sheets are part of the basic parcel described on sheet one and therefore must fit the description for the Total Property listed on sheet one. No action is necessary since the only valid response for Item 403 on a trailing sheet is zero and that is what was assumed.

Error Message: W 403-BLANK OR NON-NUMERIC, 2 ASSUMED

Cause: On sheet (1) of a parcel the Conformance to Neighborhood was coded with a non-numeric value.

Action: Item update Item 403 (Conformance to Neighborhood) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 402 (Conformance to Neighborhood). Conformance to Neighborhood must be coded on sheet one of all parcels. The system assumed that the Conformance to Neighborhood is Typical. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 403-OUT OF RANGE, 2 ASSUMED

Cause: Conformance to Neighborhood was coded less than 1 or greater than 3

Action: Item update Action Code = 4 if the assumed value of Typical (2) is not accurate.

Description: The system encountered a number greater than 3 or less than 1 for Conformance to Neighborhood. The valid range for Conformance to Neighborhood is 1 - 3. Since a value outside of this range was coded, an assumed value of Typical (2) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

BUILDING DATA ITEMS

PART VIII

501.1

STRUCTURE CODE

Source: Property record card

Required: For each structure on a parcel counted as a principal building

Data type: Numeric

Enter the Structure Code from the table below for the building under consideration. If you have no principal building then leave all Items 501-560 Blank.

If the structure is a Single Family Residence (SFR), or mobile home (MOB) be sure to code Items 502 through 560.

If the structure is other than SFR or MOB, leave items 502 through 559 blank. The appraised value of the structure is to be entered in Flat Add Costs (Item 560).

AUT	Automobile Dealer (new or used)
BAR	Bar or Tavern
BNK	Bank or Savings and Loan
BWL	Bowling Alley
CRH	Church or Synagogue
CON	Condominium
DEP	Department Store
DUP	Duplex
FRT	Fraternal Building
GAR	Garage
GAS	Gas Station or Service Garage
HOT	Hotel
HSP	Hospital
IND	Industrial Building
LAU	Laundromat or Dry Cleaner
MAR	Market or Grocery Store
MED	Medical Office Building
MOB	Mobile Home
MOT	Motel
MUL	Multi-Family Apartments (4 or more units)
OFF	Office Building
OTH	Other Structure (does not reasonably fall into one of the other codes)
PKL	Parking Lot
RES	Restaurant
RTL	Retail Store
SFR	Single Family Residence
SHD	Shed
THE	Theater
TRI	Triplex
TRL	Trailer Court Improvements
WAR	Warehouse

Error Printout Explanation

Error Message: W 501-BLANK WHEN BUILDING DATA PRESENT; "SFR" ASSUMED

Cause: The Structure Code was left blank when data items were coded in Items 502-559.

Action: Item Update Structure Code (Item 501) Action Code = 4 if the assumed value of SFR is not correct.

Description: The system encountered spaces in Item 501 (Structure Code), so it checked to see if any Items 502-559 were coded greater than zero. Since Items were coded, the system assumed that a single family residence was the most logical assumption and SFR was assumed. If the assumed value of SFR is correct no action is necessary. If the assumed value is incorrect then Item Update Item 501 (Structure Code) Action Code = 4.

Error Message: W 501-BLANK WHEN 560 DATA PRESENT: "OTH" ASSUMED

Cause: The Structure Code was left blank when data items were not coded in Items 502-559 and Item 560 was coded.

Action: Item update Structure Code (Item 501) Action Code = 4 if the assumed value of OTH is not correct.

Description: The system encountered spaces in Item 501 (Structure Code), so it checked to see if Items 502-559 were coded greater than zero. Since it didn't find any items coded greater than zero, the system checked Item 560 and found that it had been coded greater than zero. Since Item 560 was coded and Items 502-559 were not coded, the system assumed that the parcel was commercial and assumed a Structure Code of "OTH". If OTH (OTHER) is correct, no action is necessary. If OTH is not correct then Item Update Item 501 (Structure Code) Action Code = 4.

Error Message: E 501-INVALID STRUCTURE CODE

Cause: The Structure Code that you used was not one of the valid Structure Codes Listed.

Action: Item update Structure Code (501) to one of the codes listed on page 501.1 of this section.

Description: The system compared the value that you coded for Structure Code with each of the values listed on page 501.1. The system did not find a match and determined that the Structure Code was invalid. No assumption was made. Item update Action Code = 4 Item 501 (Structure Code) to provide an accurate cost computation.

Error Message: W 501-CODED SFR OR MOB AND 207 NOT = 1

Cause: Item 501 Structure Code is "Residential" SFR or MOB; 207 Property Type is not coded 1 "Residential".

Action: None if your coding is correct. This is a warning to indicate a possible inconsistancy. If your coding is in error you should item update the incorrect data Action Code = 4.

Description: The system checked your Structure Code and found that it was valid; however it appears inconsistant with Item 207 (Property Type). Your Structure Code was coded as either MOB or SFR while Item 207 (Property Type) was coded something other than 1 "Residential". This combination of coding is not invalid but it is unusual. The warning message is provided to point out that the data is inconsistant.

YEAR BUILT

Source: Property record card, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the year in which the building was completed. Do not consider remodeling or additions, only the original building. Be sure to always enter all four digits.

Error Printout Explanation:

Error Message: E 502-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Year Built was left blank or was coded with a non-numeric variable.

Action: Item update Item 502 (Year Built) with the correct data Action Code = 4 if the zero assumed value is not correct.

Description: The system checked Item 502 (Year Built) and found that it was either left blank or was coded or punched with a non-numeric variable.

Error Message: W 502-EXCEEDS CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: Year Built was coded or punched greater than the current year.

Action: Item update Year Built with the correct information.

Description: The system compared the Year Built with the current year and found that the year specified in Item 502 is greater than the current year. Since the system cannot calculate the year the structure was built it assumed the current year. You should check to see what the correct year built is and item update the parcel Action Code = 4. If the current year assumed is correct, no action is necessary.

WORKMANSHIP

Source: Interior inspection

Required: For all residential properties

Data type: Coded

The prime consideration for this item is whether the workmanship constitutes an exception. Enter a "1" if the workmanship is of poor quality, noticeably below average for the quality grade of the building. Check finish work, cabinets, etc..

Enter a "2" if the workmanship is neither poor nor outstanding, i.e., more or less average for the quality grade of the building.

Enter a "3" if the workmanship is of outstanding quality, noticeably above average for the quality grade of the building. It may contain special cabinetry, extra built-in closets, appealing exterior elevation with well detailed trim, etc..

Error Printout Explanation

Error Message: W 503-BLANK OR NON-NUMERIC, 2 ASSUMED

Cause: Item 503 (Workmanship) was coded with a non-numeric value, or was left blank.

Action: Item update Item 503 (Workmanship) Action Code = 4 if the assumed value "Typical" is not correct.

Description: The system encountered a blank or non-numeric value in Item 503 (Workmanship). Workmanship must be coded on sheet one of all parcels. The system assumed that the Workmanship is Typical. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 503-OUT OF RANGE, 2 ASSUMED

Cause: Item 503 (Workmanshp) was coded greater than 3.

Action: Item update Action Code = 4 if the assumed value of Typical (2) is not accurate.

Description: The system encountered a number greater than 3 for Workmanship. The valid range for Workmanship is 0 - 3. Since a value outside of this range was coded an assumed value of Typical (2) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

CONDITION

Source: Property record card, exterior inspection

Required: For all residential buildings

Data type: Coded

Enter a "1" (poor) if the building shows evidence of major physical deterioration for its quality grade and age, such as severely cracked foundation; excessive weathering; extensive slide, mud or storm damage; or any other condition that would require a major expenditure relative to the cost of the building to correct.

Enter a "2" (fair) if the building shows evidence of minor physical deterioration for its quality grade and age, conditions that would require a minor expenditure relative to the cost of the building to correct.

Enter a "3" (average) if the building is maintained without noticeable deterioration for its quality grade and age. Reasonable maintenance has been done and no current expenditures are required.

Enter a "4" (good) if the building has been maintained at a level beyond that expected for homes of the same quality grade and age. The building is in effect in a better state of repair or younger than its actual age.

Enter a "5" (excellent) if the building is in outstanding condition, no deterioration is present for its quality grade and much less than could be expected for its actual age. The home is "like new". Most new homes would automatically be in excellent condition (but not always).

Error Printout Explanation:

Error Message: W 504-BLANK OR NON-NUMERIC, 3 ASSUMED

Cause: Item 504 (Condition) was coded with a blank or non-numeric value.

Action: Item update Item 504 (Condition) Action Code = 4 if the assumed value "Typical" is not correct.

Description: The system encountered a blank or non-numeric value in Item 504 (Condition). Condition must be coded. The system assumed that the Condition of the structure is Average. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 504-OUT OF RANGE, 3 ASSUMED

Cause: Item 504 (Condition) was coded greater than 5.

Action: Item update Action Code = 4 if the assumed value of Average (3) is not accurate.

Description: The system encountered a number greater than 5 for Condition. The valid range for Condition is 0 - 5. Since a value outside of this range was coded, an assumed value of Average (3) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

QUALITY GRADE

Source: Visual inspection of structure

Required: For all residential buildings

Data type: Coded

The accuracy of a residential appraisal depends largely upon the selection of the correct grade. Grade represents quality. Quality applies to both workmanship and type of materials used. The combination of quality workmanship and materials reflects increased cost and value. The value of a dwelling constructed of high quality materials and with the best of workmanship throughout may be considerably more than that of one built from the same floor plan with inferior materials and workmanship.

The grading of structures is being used to distinguish between variations in value and identifies the full range of conventional single family residential construction. The specifications as to type of facilities may not vary greatly between grades, however, the quality of materials, workmanship and design may be decidedly different.

The majority of dwellings fall within the definite grade of construction incorporating average quality of workmanship and materials. Consequently, better quality of construction, or construction of cheaper quality, can be determined by comparison with the average. A thorough inspection of both the inside and outside of a structure will reveal evidence of degrees of quality.

There are many chances for error in selecting the proper grade for a residence; such as grading the housewife's housekeeping ability, giving too much credit to the landscaping, being influenced by a new paint job, or the lack of proper maintenance. Always look for quality or the lack of it, and if the house happens to be older, try to picture the quality it represented when new and grade it as if it were new. Adjustments for condition will be made through application of depreciation.

This manual has eight basic grades of residences: (See the pricing specifications at back of manual)

1 Cheap

2 Poor

3 Low cost

4 Fair

5 Average

6 Good

7 Very good

8 Excellent

The basic grade, representing costs of construction with average quality of workmanship and materials involved, is designated as Grade 5.

Grading would be a relatively simple process if all houses were built to conform to the base specifications outlined in this manual. Since this ideal condition does not exist, it becomes necessary to further refine the grading system. It is not unusual for conventional houses to be built incorporating construction qualities that fall in between the specifications of these established grades. If the house that is being appraised does not fall exactly in a specific grade, the grade designation should be adjusted as deemed necessary by the use of the Grade Variation (Item 506). Enter the grade of the structure from "1" to "8", inclusive.

For mobile homes a separate grading system has been devised. If Item 501 (Structure Code) is equal to "MOB" then the following grades and codes must be utilized for Item 505 (Quality Grade):

Code	Grade
L	Low Cost
A	Average
G	Good
E	Excellent

Error Printout Explanation:

Error Message: W 505-501 IS CODED "MOB"; 505 OUT OF RANGE, "A" ASSUMED

Cause: Structure Code (Item 501) was coded MOB while the Quality Grade was not coded L-A-G or E.

Action: Item update Item 505 (Quality Grade) Action Code = 4 if the assumed value of "A" Average is not correct.

Description: The system encountered a conflict between Item 501 (Structure Code) and Item 505 (Quality Grade). The Structure Code indicates a mobile home while the Quality Grade is not coded with an L-A-G or E. The system assumed Average "A" for the Quality Grade but this may not be correct. You should check your records and verify the correct Quality Grade. If the assumed value of "A" is correct no action is necessary. If "A" is incorrect item update Action Code = 4. ***Note: This item must be coded correctly to produce an accurate cost computation.

Error Message: W 505-NOT NUMERIC, 5 ASSUMED

Cause: Item 505 (Quality Grade) was coded with a non-numeric value.

Action: Item update Item 505 (Quality Grade) Action Code = 4 if the assumed value Average (5) is not correct.

Description: The system encountered a non-numeric value in Item 505 (Quality Grade). Quality Grade must be coded. The system assumed that the Quality Grade is Average (5). If the assumed value is not correct item update the parcel Action Code = 4. ***Note: This item must be coded correctly to produce an accurate cost computation.

Error Message: W 505-OUT OF RANGE, 5 ASSUMED

Cause: Item 505 (Quality Grade) was coded greater than 8 or less than 1.

Action: Item update Action Code = 4 if the assumed value of Average (5) is not accurate.

Description: The system encountered a number greater than 8 or less than 1 for Quality Grade. The valid range for Quality Grade is 1 - 8. Since a value outside of this range was coded an assumed value of Average (5) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4. ***Note: This item must be coded correctly for an accurate cost computation.

GRADE VARIATION

Source: Visual inspection of structure

Required: For all single family residences (SFR) and/or mobile homes (MOB)

Data type: Signed numeric, leading zeros required

Enter the grade variation in whole percent, right-justified. Place the "+" or "-" sign in the left most column. It is not advisable to plus or minus a grade by more than 15%; however, it may be necessary to plus a grade 8 residence by 20% or more to realistically reflect its quality, and to minus a grade 1 residence by more than 20% for the same reason. See Page 506.2

If no grade variation is to be applied, enter "000".

Error Printout Explanation:

Error Message: W 506-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 506 (Grade Variation) was coded with a non-numeric or blank value.

Action: Item update Item 506 (Grade Variation) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 506 (Grade Variation). Grade Variation must be coded. the system assumed that the Grade Variation is None (0). If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 506-EXCESSIVE GRADE VARIATION

Cause: The Grade Variation that you have specified has pushed the Quality Grade of your Structure into another Quality Grade either higher or lower.

Action: No action is necessary if you intentionally crossed Quality Grade boundaries. If not, you should item update the Grade Variation Action Code = 4.

Description: The system found that when you specified your grade variation either + or - you exceeded the boundaries of the Quality Grade. In effect you have varied the existing grade by an amount that pushes you into another Quality Grade. Examine the chart on the top of page 506.2 of this section and determine whether or not your Grade Variation is within the correct bounds. If you have incorrectly specified the Grade Variation item update Action Code = 4. If you actually intended to exceed the Quality Grade then no action may be required.

Grade	Variation to Next Highest Grade	Highest Value	Lowest Value
1	19%	+9%	Bottom
2	19%	+9%	-9%
3	17%	+8%	-9%
4	15%	+7%	-8%
5	29%	+13%	-7%
6	19%	+9%	-13%
7	19%	+9%	-9%
8	Top	Top	-9%

An error message will be printed any time a high value or low value is placed in Item 506 (Grade Variation) which exceeds the above values. This message is a warning that, although you have graded an improvement at a specific grade, your grade variation has pushed that grade to a higher or lower grade classification. If you find that you must exceed the Grade Variation bounds you should check to see if you have the residence properly graded.

EFFECTIVE AGE

Source: Visual inspection of structure

Required: For all structures where no entry is made for physical depreciation (Item 508).

Data type: Numeric

Only one of the items, effective age or physical depreciation, may be entered for the building. Effective age is another way of stating physical depreciation.

If the condition of the building is better than average, the effective age will be less than the actual age. If the condition is worse than average, the effective age will be greater than the actual age. Effective age must be greater than zero and not greater than 80 years. Enter effective age in years, right-justified. If effective age is not used, code zeros.

Major alterations, additions or rebuilding can extend the useful life of a building and add to its present value. Typically the chronological life is not a solid indication of the amount of depreciation that should be applied. The "effective age" should be the guide.

Neither can the cost of alterations and additions be added directly to the previous appraised value of the building. So a method for indicating how alterations, additions, and remodellings can impact the "effective age" of a building, is stated below:

Great care must be exercised when using this method. Minor errors in remodeling percentages and chronological building life quickly render this method unacceptable. There is no substitute for the appraiser's analysis and supportable opinion. The analysis required to determine correct depreciation levels should include the comparison of replacement cost values to market evidence.

EXAMPLE I. Building 51 years old was remodeled by 20% 9 years ago:

20% X 9 years =	180
80% X 51 years =	4080
Total	4260

4260 divided by 100% = 43 years effective age

EXAMPLE II. Building 40 years old was remodeled by 30% 1 year ago:

30% X 1 year	=	30
70% X 40 years	=	2800
Total		2830

2830 divided by 100% 28 years effective age

Error Printout Explanation

Error Message: W 507-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Effective Age (Item 506) was left blank or was not coded with a numeric variable.

Action: Item update Effective Age Action Code = 4 if the zero assumed value is not correct.

Description: The system found that the coding for Effective Age was either blank or was non-numeric. Since the system is unable to calculate the Effective Age, zeros were assumed. Item update the parcel Action Code = 4 if the zero assumed value is not correct.

Error Message: W 507-GREATER THAN 32 YEARS, 32 ASSUMED

Cause: Effective Age was coded greater than 32 years for a mobile home.

Action: Item update Item 507 (Effective Age) to a value less than 32 years.

Description: The maximum value for mobile home Effective Age is 32 years. The system encountered a value greater than 32 years coded in Item 507. You should check your mobile home depreciation table and determine what the correct Effective Age should be. If you find that your Effective Age was in error, and the assumed value of 32 is not correct, item update Effective Age Action Code = 4.

Error Message: W 507-GREATER THAN 70 YEARS, 70 ASSUMED

Cause: Effective Age was coded greater than 70 years which is the maximum allowable value.

Action: Item update Effective Age (Item 507) Action Code = 4

Description: The maximum value for Effective Age is 70 years in non-mobile home structures. The value that you coded for Effective Age exceeds 70 years. The system assumed a value of 70 years for the parcel. You should check your Effective Age calculations and item update Effective Age Action Code = 4 if the 70 years assumed value is not correct.

Error Message: E 507-IS ZERO AND 508 THRU 510 ALSO ZERO

Cause: Items 507 thru 510 have all been coded zero - no cost comp can be generated accurately.

Action: Item update either 507 (Effective Age) or Item 508 (Physical Depreciation) Action Code = 4.

Description: The system found that no depreciation has been coded for the parcel. In order for an accurate cost comp value to be generated some form of depreciation must be listed. Either provide a value for Effective Age (Item 507) or a value for Item 508 (Physical Depreciation).

Error Message: W 507-CANNOT BE GREATER THAN ZERO WHEN 508 IS GREATER THAN ZERO, ZERO ASSUMED

Cause: Effective Age (Item 507) and Physical Depreciation (Item 508) were both coded.

Action: Item update Item 507 (Effective Age) and Item 508 (Physical Depreciation) if the zero assumed value is not correct.

Description: Only one form of depreciation may be coded either Effective Age or Physical Depreciation. The system found that you had coded both types of depreciation so it assumed zero for the value of Effective Age (Item 507). If you wanted Effective Age coded and not Physical Depreciation then you should item update Item 508 (Physical Depreciation) to zero and item update Item 507 (Effective Age) to the value that you want coded. If the zero assumed value for Effective Age is correct no action is necessary. Remember one of the two items - either Effective Age or Physical Depreciation must be coded zero.

LIFE EXPECTANCY PER GRADE

Effective Age Years	Grade 8C	Grades 8D, 7C & 6C	Grades 7D, 6D, 5D, 5C	Grades 4C, 4D, 3C, 3D	Grades 1C, 2C	Grades 1D, 2D	Outbuilding Pools
	60 Years	55 Years	50 Years	45 Years	35 Years	30 Years	20 Years
2	1	2	2	2	4	4	7
4	3	3	4	4	7	9	15
6	4	5	6	7	11	14	24
8	6	7	8	10	15	19	33
10	8	9	11	13	20	25	43
12	10	11	13	15	24	31	53
14	12	13	16	19	29	37	61
16	13	16	19	23	34	43	70
18	16	19	22	27	40	50	76
20	18	21	25	30	45	56	79
22	20	23	28	34	51	62	80
24	23	26	31	38	57	68	
26	25	29	35	43	62	74	
28	28	33	39	47	68	77	
30	31	36	44	52	71	79	
32	34	40	47	56	74	80	
34	37	44	51	60	77	80	
36	40	47	55	65	79	80	
38	43	51	59	69	80	80	
40	47	55	63	72	80	80	
42	51	59	66	75	80	80	
44	54	62	69	77	80	80	
46	57	65	72	79	80	80	
48	61	68	75	80	80	80	
50	64	71	77	80	80	80	
52	66	73	79	80	80	80	
54	68	75	80	80	80	80	
56	70	77	80	80	80	80	
58	72	79	80	80	80	80	
60	74	80	80	80	80	80	
62	76	80	80	80	80	80	
64	77	80	80	80	80	80	
66	78	80	80	80	80	80	
68	79	80	80	80	80	80	
70	80	80	80	80	80	80	

On dwellings that have exceeded 60 years effective age use extreme caution. These tables are to be used as a guide only under normal conditions. The suggested depreciations may be increased if the structure is in poor condition and decreased if it is in good condition for the age. This is an effective age schedule. It is not to be used in a remaining life or chronological age concept..

PHYSICAL DEPRECIATION

Source: Visual inspection of structure

Required: For all structures where no entry is made for effective age (Item 507).

Data type: Numeric

Depreciation goes to work immediately upon completion of a building and continues until the building is no longer usable. It is used in the cost approach to value and is the difference, stated as a percentage, between the current replacement cost of the building and its estimated market value.

The three types of depreciation that can affect value are physical deterioration, functional obsolescence and economic obsolescence. These are further broken down into curable and incurable.

Physical depreciation can be detected and recognized by personal inspection. It may consist of wear and tear of such items as gutters and downspouts, windows, and screens or there may be a need for painting or redecorating. Loose siding, missing shingles, rusted flashings and valleys, cracked plaster, loose electrical switches and broken fixtures, leaking plumbing or a furnace or boiler in bad repair are among other indications of physical deterioration. These conditions are usually curable and should be a part of the normal maintenance given the structure. There are, however, other evidences of the deterioration of the bone structure of a building, such as a settling of foundations, cracked bearing walls, broken floor joists or sagging rafters that might indicate an incurable condition because it may not be economically sound to repair the defects.

Functional obsolescence reflects the loss of value because of decreased utility or desirability in a structure caused by such things as outmoded plumbing or heating, insufficient electrical outlets or abnormally high ceilings, etc. These are usually curable. Other conditions, such as outmoded architecture, a poor floor plan or columns and bearing walls that interfere with the proper utilization of space may not be possible to cure or may not be curable from an economic standpoint. It is possible to build an undesirable feature and functional obsolescence into a new building.

Economic obsolescence is caused by forces outside of the building itself, such as business encroachment into a residential district or an influx of unharmoneous inhabitants into a neighborhood. It is very seldom, if ever, curable.

If abnormal depreciation is applied to a building, be sure to explain the reasons under remarks on the back of the form.

Only one of the items, effective age or physical depreciation, must be entered for the building. Effective age is another way of stating physical depreciation.

Enter the amount of physical depreciation in whole percent, right-justified. Physical depreciation must be greater than zero and no greater than 80% when effective age is not coded.

If physical depreciation is not entered, enter 00.

Error Printout Explanation

Error Message: W 508-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 508 (Physical Depreciation) was either punched or coded with a blank or non-numeric value.

Action: Item update Item 508 (Physical Depreciation) Action Code = 4, if the zero assumed value is not correct.

Description: The system encountered a blank or non-numeric coded value for Item 508 (Physical Depreciation). The system had no method of determining what the value for Physical Depreciation should be so it assumed a value of zeros. If the zero assumed value is not correct you should item update Physical Depreciation (Item 508) Action Code = 4. ***Note: Check to make sure that Item 507 (Effective Age) is not already coded if you are updating Item 508.

Error Message: W 508-CANNOT BE GREATER THAN 80, 80 ASSUMED

Cause: Physical Depreciation (Item 508) was coded with a value greater than 80.

Action: No action is necessary if the assumed value of 80 is correct; otherwise item update if the value should be less than 80.

Description: The system found that Physical Depreciation was coded greater than 80. Physical Depreciation has a maximum value of 80%. Any value exceeding 80% would reduce the value of the structure below salvage value. Since the value exceeded 80% the system assumed a value of 80%. If the 80% assumed value is too high then item update Item 508 (Physical Depreciation) Action Code = 4. If the assumed value is correct no action is necessary. If you have determined that the value of the structure falls below the value computed based upon 80% depreciation you should code a minus dollar amount in Item 560 (Flat Add Costs) to bring the value of the structure down to the proper amount.

Error Message: E 508-CANNOT = ZEROS WHEN PERCENT COMPLETE = 100%

Cause: Item 511 (Percent Complete) is equal to 100, Effective Age Item 507 equals zeros and Item 508 (Physical Depreciation) equals zeros.

Action: Item update either Effective Age (Item 507) or Physical Depreciation (Item 508) Action Code = 4.

Description: The system found that both Effective Age and Physical Depreciation were coded or punched with zeros. Since the structure is 100% complete, a value must be coded in either Effective Age or Physical Depreciation. Item update either Item 507 (Effective Age) or Item 508 (Physical Depreciation) Action Code = 4.

FUNCTIONAL OBSOLESCENCE

Source: Visual inspection of structure

Required: For all structures where an entry has been made in Effective Age (Item 507) or Physical Depreciation (Item 508)

Data type; Numeric

Functional obsolescence reflects loss of value because of decreased utility or desirability in a structure caused by such things as outmoded plumbing or heating, insufficient electrical outlets, abnormally high ceilings, inefficient floor plans, outmoded architecture, etc. It is even possible to build functional obsolescence into a new building.

Enter the amount of functional obsolescence in whole percent, right-justified. The obsolescence must not be greater than 80%. Enter zero for none.

Error Printout Explanation

Error Message: W 509-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 509 (Functional Obsolescence) was coded with a non-numeric value.

Action: Item update Item 509 (Functional Obsolescence) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 509 (Functional Obsolescence). The system assumed that the Functional Obsolescence is zero. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 509-CANNOT BE GREATER THAN 80, 80 ASSUMED

Cause: The value coded for Item 509 (Functional Obsolescence) exceeds 80%.

Action: Item update Functional Obsolescence (Item 509) Action Code = 4 if the assumed value of 80% is not correct.

Description: The system encountered a value greater than 80% for Item 509 (Functional Obsolescence). The maximum allowable value for Functional Obsolescence is 80%. Since the coded value exceeded 80% the system assumed a value of 80%. If the assumed value is too high then Item update Item 509 Action Code = 4. If 80% is not considered high enough and the value of the structure is below the 20% salvage, value the Structure in Item 560 (Flat Add Cost) by entering a minus Flat Add Cost that would result in a proper value.

ECONOMIC OBSOLESCENCE

Source: Property record card

Required: For all principal buildings where an entry has been made for effective age (Item 507) or physical depreciation (Item 508)

Date type: Numeric

Economic obsolescence reflects loss of value caused by forces outside of the parcel itself, such as business encroachment into residential areas, influx of unharmoneous inhabitants into the neighborhood, etc.

Enter the amount of economic obsolescence in whole percent, right-justified. The obsolescence must not be greater than 80%. Enter zero for none.

Error Message: W 510-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 510 (Economic Obsolescence) was coded with a non-numeric value.

Action: Item update Item 510 (Economic Obsolescence) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 510 (Economic Obsolescence). The system assumed that the Economic Obsolescence is zero. If the assumed value is not correct, item update the parcel Action Code = 4.

Error Message: W 510-CANNOT BE GREATER THAN 80, 80 ASSUMED

Cause: The value coded for Item 509 (Economic Obsolescence) exceeds 80%

Action: Item update Economic Obsolescence (Item 509) Action Code = 4 if the assumed value of 80% is not correct.

Description: The system encountered a value greater than 80% for Item 510 (Economic Obsolescence). The maximum allowable value for Economic Obsolescence is 80%. Since the coded value exceeded 80% the system assumed a value of 80%. If the assumed value is too high, item update Economic Obsolescence Action Code = 4. If 80% is not considered high enough and the value of the structure is below the 20% salvage value then make the adjustments for value in Item 560 (Flat Add Cost) by entering a minus Flat Add Cost.

PERCENT COMPLETE

Source: Property record card, or exterior and interior inspection

Required: For all principal buildings

Data type: Numeric

This item is to be applied to new construction only. Do not consider remodeling, additions or older improvements with unfinished areas. Enter the percent complete in whole percent, right-justified. If complete, enter 100. If the improvement is not complete, enter the percent complete and code a 1 in Item 702 continued review needed.

Determine the percent completed by using the percent complete chart.

PERCENT COMPLETE CHART

		With Basement	Without Basement
1.	Excavation	2	*
2.	Footing & foundations, walk, columns	7	4
3.	Floor joist	2	2
4.	Subfloor	1	2
5.	Wall framing (thru top plates)	7	7
6.	Wall Sheathing	4	4
7.	Roof framing, ceiling joists, sheathing & felt	8	9
8.	Roofing	3	3
9.	Felt, siding, exterior trim, porches, etc.	6	6
10.	Siding, primed	1	1
11.	Windows and exterior doors	8	9
12.	Plumbing - roughed in	4	5
13.	Sewage disposal	2	2
14.	Heating - roughed in	1	1
15.	Electric - roughed in	2	2
16.	Insulation, walls & ceiling	1	1
17.	Dry wall or plaster	6	7
18.	Basement & porch floors - steps	2	1
19.	Heating - finished	5	5
20.	Flooring, including kitchen & bath	4	4
21.	Interior carpentry, trim & doors	5	5
22.	Cabinets & counter tops	4	4
23.	Interior decoration	4	4
24.	Exterior paint	2	2
25.	Plumbing - complete fixtures, sink & water heater	4	5
26.	Electric - complete fixtures	1	1
27.	Finished hardware	1	1
28.	Gutters & downspouts	1	1
29.	Sanding & finishing floors	1	1
30.	Grading, walks & landscaping	1	1
		100	100

* Include with footings and foundations.

Error Message: W 511-BLANK OR NON-NUMERIC, 100 ASSUMED

Cause: Item 511 (Percent Complete) was coded with a non-numeric value.

Action: Item update Item 511 (Percent Complete) Action Code = 4 if the assumed value is not correct.

Description: The system encountered a non-numeric value in Item 511 (Percent Complete). The system assumed that the Percent Complete is 100%. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 511-CANNOT = ZEROS, 100 ASSUMED

Cause: Item 511 (Percent Complete) was coded or punched with zeros.

Action: Item update Percent Complete (Item 511) Action Code = 4 if the 100% assumed value is not correct.

Description: The system found that Item 511 (Percent Complete) was coded with zeros when there was a principal building coded. Since a structure exists it must be totally complete or some percentage of completion. Item update Percent Complete (Item 511) Action Code = 4 if the 100% complete assumed value is not correct.

Error Message: W 511-CONFLICT WITH ITEM 702, 702 = 01 ASSUMED

Cause: Percent Complete was coded less than 100 and continued review needed was not checked as 1 (New Construction).

Action: No action is necessary if the assumed value of 1 (New Construction) is valid for Item 702.

Description: The system found that you had coded Percent Complete less than 100 suggesting that a principal building was not yet complete. The system then looked to see whether or not you had coded Item 702 (Continued Review Needed) with a 1 (New Construction). The system found that Item 702 had been coded but the value was greater than 1 (New Construction). The system changed Item 702 continued review needed to a value of 1 (Construction of A New Principal Building is Incomplete).

Error Message: W 511-CANNOT BE GREATER THAN 100, 100 ASSUMED

Cause: Item 511 (Percent Complete) was coded greater than 100%.

Action: Item update Item 511 (Percent Complete) Action Code = 4 if the assumed value of 100% is not correct.

Description: The system found that a value exceeding 100% was coded in Item 511 (Percent Complete). Since it is impossible to complete a structure more than 100% a value of 100% was assumed. If the 100% assumed value is to high and the structure is not complete item update Item 702 (Continued Review Needed) to a 1 for "New Construction". If the 100% assumed value is correct no action is necessary.

STORIES

Source: Property record card, exterior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the number of full stories in the left-hand column, before the decimal point. There must be at least one. Enter the number of half stories ("0" for none, "5" for one) in the right-hand column, after the decimal point. Be careful about what constitutes a full story, a half story, and an attic. If the usable area on a floor is more than 75% of the total ground floor area, it is a full story. If the usable area is between 35% and 75% of the total ground floor area, it is a half story. If the usable area is less than 35% of the total ground floor area but greater than 0%, it is an attic.

Rule of Thumb:
- Half Story - Eaveline generally intersects midline of windows.
- Full Story - Eaveline generally extends above windows.
- Attic - Eaveline generally extends below windows.

Also be careful not to confuse a daylight basement with a full story. All basements, including daylight basements, are described in items 520 through 523.

***Note: When item updating stories it is not necessary to code the decimal point, the system will code it, i.e., don't code 1.5 but code 15 for 1½ stories.

Error Message: W 512-BLANK OR NON-NUMERIC, 1.0 ASSUMED

Cause: Item 512 (Stories) was coded with a non-numeric value.

Action: Item update Item 512 (Stories) Action Code = 4 if the assumed value of 1 story is not correct.

Description: The system encountered a non-numeric value in Item 512 (Stories). The system assumed that the structure has 1 story. If the assumed value is not correct item update the parcel Action Code = 4. ***Note: When item updating items containing decimal points do not code the decimal point. The system will automatically code the decimal point. For example stories would be updated as 15 not 1.5 or 1 space 5.

Error Message: W 512-CANNOT BE LESS THAN 1.00, ASSUMPTIONS MADE ON BASIS OF 542 and 544

Cause: Stories was coded less than 1.

Action: Item update Item 512 (Stories) Action Code = 4, if the assumed value is not correct.

Description: The system found that Item 512 (Stories) was coded less than 1 (either .1-.9, 0, or blank). In order to continue processing the parcel and generate a Cost Comp value the system determined that it could calculate the number of Stories based upon the information provided in Item 542 and 544. If information is provided in Item 542 (Upper Floor Area) then the system calculates the number of whole stories. If information is provided in Item 544 (Half Story Area) and not in Item 542 (Upper Floor Area) the system calculates the number of Half Stories. If values are coded in both Items 542 (Upper Floor) and Item 544 (Half Story) areas then the system calculates a value for both whole and half stories. If information is not provided in Items 542 and 544, 1.0 Story is assumed. If the assumed value is not correct item update Item 512 (Stories) Action Code = 4 and check your coding in Items 542 and 544 of the parcel.

Error Message: W 512-CANNOT BE = 1.0, ASSUMPTIONS MADE ON BASIS OF 541 and 542.

Cause: Item 512 (Stories) is = 1.0 while Item 542 (Upper Stories) is coded greater than zero.

Action: Item update Item 512 (Stories) if the assumed value is not correct.

Description: The system found that Item 512 (Stories) was coded 1.0. The system then looked at Item 542 (Upper Floor Area) and found that data was coded in this field. Since data was coded for Upper Floor Area the system felt that the 1.0 stories coded could not be accurate. The system assumed a value for Item 512 (Stories) based upon the following formula.

$$\text{Stories} = \frac{\text{Upper Floor Area}}{\text{First Floor Area}} + \frac{\text{Half Story Area}}{\text{First Floor Area}}$$

Error Message: W 512-CANNOT BE GREATER THAN 1.0, ASSUMPTIONS MADE ON BASIS OF 542

Cause: Item 512 (Stories) was coded greater than 1.0 while the Upper Floor Area was coded zero.

Action: Item update Item 512 (Stories) if the calculated value that is assumed is not correct.

Description: The system found that you coded Item 512 (Stories) 2.0 or greater but Item 542 (Upper Stories) does not support your coding since it was coded with zeros. The system decided to calculate the Stories based upon the information you provided in Items 542 and 544. The following formula was used to derive that value.

$$\text{Stories} = \frac{\text{Upper Floor Area}}{\text{First Floor Area}} + \frac{\text{Half Story Area}}{\text{First Floor Area}}$$

If the calculated assumed value is not correct then item update Item 512 (Stories) Action Code = 4. You should also go back and check to ensure that your coding for Items 542 (Upper Floor Area) and Item 544 (Half Story Area) are correct.

Error Message: W 512-DECIMAL POSITION MUST = .0 OR .5, ASSUMPTIONS MADE ON BASIS OF 542 and 544

Cause: The decimal value on Stories was not equal to 5 or 0 which are the only two valid values.

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct check your coding for Item 544 (Half Story Area), then item update Item 512 (Stories) Action Code = 4.

Description: The system found that the decimal portion of Item 512 (Stories) was in error. The system found that a value other than 0 or 5, the only valid values, was coded. The system looked at Items 542 and 544 and made it's assumption based upon the values listed in those Items. If the assumed value is not correct, check your coding in Items 542 and 544. Item update any incorrect information that you find Action Code = 4.

Error Message: W 512-ITEM 544 LARGER THAN ZERO, .5 ASSUMED

Cause: The decimal value in Stories (Item 512) was not equal to 5 and Item 544 was coded greater than zeros.

Action: No action is necessary if the assumed value of .5 is correct. If the assumed value is not correct check your coding in Item 512 and 544 and item update all errors Action Code = 4.

Description: The system found that the decimal value in Stories was not equal to 5. The system also found that item 544 (Half Story Area) was coded with a value greater than zeros. It is inconsistent to have a Half Story Area listed and have no half story listed in Item 512. The system assumed a half story existed based upon the value coded in Item 544 (Half Story Area) and assumed a .5 for the decimal value. If the assumed value is incorrect then check the values you have coded in Items 512 and 544 and correct all information in error Action Code = 4.

Error message: E 512-ABOVE ASSUMPTIONS CANNOT BE MADE

Cause: The system was unable to calculate the value for Item 512 (Stories) based upon the information provided in Items 542 and 544.

Action: Thoroughly review the data you have coded in Items 512, 542 and 544. Item update any Items that are found to be in error Action Code = 4.

Description: The system is designed to calculate and assume a value for Item 512 (Stories) when it finds Item 512 blank or inconsistent with values coded in Items 541, 542, and 544. The system calculates the number of Stories based upon the following formula.

$$\text{Stories} = \frac{\text{Upper Floor Area}}{\text{First Floor Area}} + \frac{\text{Half Story Area}}{\text{First Floor Area}}$$

In this particular case the system found that based upon the information that was provided in Items 541, 542 and 544 it was unable to accurately calculate a value. Check to ensure that your data coded in Items 541, 542 and 544 is correct. Any errors should be item updated Action Code = 4.

FOUNDATION

Source: Property record card or exterior inspection

Required: For all principal buildings

Data type: Coded

Determine the predominant type of foundation, select its code from the table below and enter the code on the form.

0 No foundation (e.g., dirt)
1 Wooden or masonry piers/posts
2 Poured concrete, concrete block, cinder block, or fitted stone
3 Poured concrete slab.

Error Printout Explanation:

Error Message: W 513-BLANK OR NON-NUMERIC, 2 ASSUMED

Cause: Item 513 (Foundation) was coded or punched with a blank or non-numeric value.

Action: Item update Item 513 (Foundation) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 513 (Foundation) was either left blank or was coded with a non-numeric value. The system assumed a value of Cement (2) for Foundation. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Foundation Action Code = 4.

Error Message: W 513-OUT OF RANGE, 2 ASSUMED

Cause: The value coded for Item 513 (Foundation) is not within the valid range of responses.

Action: Item update Item 513 (Foundation) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 513 (Foundation) was not one of the possible valid responses. The valid responses for Item 513 (Foundation) range from 0 to 3. The system assumed a value of Cement (2) because that is a typical response. If Cement is not an accurate response then item update the Parcel Action Code = 4. If Cement is an accurate response then no action is necessary

WALL CONSTRUCTION

Source: Property record card or exterior inspection

Required: For all principal buildings

Data type: Coded

Determine the predominate type of wall construction, select its code from the table below and enter the code on the form. Other types of wall construction can be made equivalent to one of the below (e.g., prefab metal to frame, stone to brick).

1 Frame
2 Concrete or cinder block
3 Solid (not veneer) brick
4 Log (not log over frame)

Error Printout Explanation:

Error Message: W 514-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 514 (Wall Construction) was coded or punched with a blank or non-numeric value.

Action: Item update Item 513 (Wall Construction) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 514 (Wall Construction) was either left blank or was coded with a non-numeric value. The system assumed a value of Frame (1) for Wall Construction. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Wall Construction Action Code = 4.

Error Message: W 514-OUT OF RANGE, 1 ASSUMED

Cause: The value coded for Item 514 (Wall Construction) is not within the valid range of responses.

Action: Item update Item 514 (Wall Construction) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 514 (Wall Construction) was not one of the possible valid responses. The valid responses for Item 514 (Wall Construction) range from 1 to 4. The system assumed a value of Frame (1) because that is a typical response. If Frame is not an accurate response then item update the Parcel Action Code = 4. If Frame is an accurate response then no action is necessary.

EXTERIOR FINISH

Source: Property record card or exterior inspection

Required: For all principal buildings

Data type: Coded

Determine the predominate type of exterior finish. Enter as follows:

1 Stucco
2 Wood or composition shingle
3 Single siding
4 Log (solid or over frame)
5 Asbestos siding
6 Aluminum siding
7 Siding on sheathing
8 Solid or veneer brick or stone
9 Any other type of exterior finish markedly different in appearance from the above which cannot be equated to one of the above.

Error Printout Explanation:

Error Message: W 515-BLANK OR NON-NUMERIC, 7 ASSUMED

Cause: Item 515 (Exterior Finish) was coded or punched with a blank or non-numeric value.

Action: Item update Item 515 (Exterior Finish) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 515 (Exterior Finish) was either left blank or was coded with a non-numeric value. The system assumed a value of Siding/Sheathing for Exterior Finish. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Exterior Finish Action Code = 4.

Error Message: W 515-CANNOT = ZEROS, 7 ASSUMED

Cause: The system encountered zeros coded for Item 515 (Exterior Finish), zero is not a valid response.

Action: Item update Item 515 (Exterior Finish) action code = 4 if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Exterior Finish had been coded or punched with a zero. Zero is not a valid response for Item 515 (Exterior Finish). Valid responses for Item 515 (Exterior Finish) range from 1 to 9. The system assumed a value of Siding/Sheathing (7) because that is a typical response. If Siding/Sheathing is not an accurate response then item update the parcel Action Code = 4. If Siding/Sheathing is an accurate response then no action is necessary.

Error Message: W 515-OUT OF RANGE, 7 ASSUMED

Cause: The value coded for Item 515 (Exterior Finish) is not within the valid range of responses.

Action: Item update Item 515 (Exterior Finish) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 515 (Exterior Finish) was not one of the possible valid responses. The valid responses for Item 515 (Exterior Finish) range from 1 to 9. The system assumed a value of Siding/Sheathing (7) because that is a typical response. If Siding/Sheathing is not an accurate response then item update the Parcel Action Code = 4. If Siding/Sheathing is an accurate response then no action is necessary.

ROOF TYPE

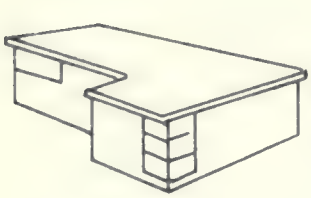
Source: Property record card or exterior inspection

Required: For all principal buildings

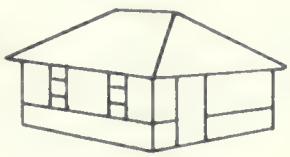
Data type: Coded

Determine the predominant type of roof for the structure, select its code from the illustrations below and enter the code on the form.

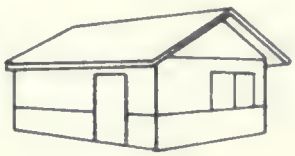
A gable or shed design with a very low pitch should be considered a flat design.



FLAT "1"

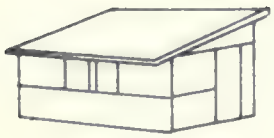


HIP "2"

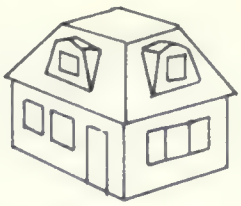


GABLE "3"

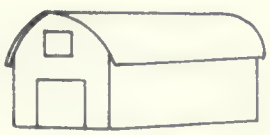
GAMBREL "4"



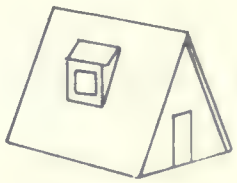
SHED "5"
(Single-pitch)



MANSARD "6"



ARCHED "7"
(Semi-circle, Quonset hut)



'A' FRAME "8"

Error Printout Explanation:

Error Message: W 516-BLANK OR NON-NUMERIC, 3 ASSUMED

Cause: Item 516 (Roof Type) was coded or punched with a blank or non-numeric value.

Action: Item update Item 516 (Roof Type) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 516 (Roof Type) was either left blank or was coded with a non-numeric value. The system assumed a value of Gable (3) for Roof Type. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Roof Type Action Code = 4.

Error Message: W 516-OUT OF RANGE, 3 ASSUMED

Cause: The value coded for Item 516 (Roof Type) is not within the valid range of responses.

Action: Item update Item 516 (Roof Type) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 516 (Wall Construction) was not one of the possible valid responses. The valid responses for Item 516 (Roof Type) range from 1 to 8. The system assumed a value of Gable (3) because that is a typical response. If Gable is not an accurate response then item update the Parcel Action Code = 4. If Gable is an accurate response then no action is necessary.

ROOFING MATERIAL

Source: Property record card or exterior inspection

Required: For all principal buildings

Data type: Coded

Determine the predominant type of roofing material. Enter as follows:

1 Wood shingles
2 Slate
3 Tile
4 Copper
5 Galvanized metal
6 Wood shake, light or heavy
7 Asphalt composition, roll or tab
8 Tar and gravel
9 Asbestos shingles

Error Printout Explanation:

Error Message: W 517-CANNOT = ZEROS, 7 ASSUMED

Cause: Item 517 (Roofing Material) was coded or punched with a blank or non-numeric value.

Action: Item update Item 517 (Roofing Material) Action Code = 4 if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 517 (Roofing Material) was either left blank or was coded with a non-numeric value. The system assumed a value of Composition Roll or Tab (7) for Roofing Material. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Roofing Material Action Code = 4.

Error Message: W 517-OUT OF RANGE, 7 ASSUMED

Cause: The value coded for Item 517 (Roofing Material) is not within the valid range of responses.

Action: Item update Item 517 (Roofing Material) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 517 (Roofing Material) was not one of the possible valid responses. The valid responses for Item 517 (Roofing Material) range from 1 to 9. The system assumed a value of Composition Roll or Tab (7) because that is a typical response. If Composition Roll or Tab is not an accurate response then item update the parcel Action Code = 4. If Composition Roll or Tab is an accurate response then no action is necessary.

ORNAMENTAL EXTERIOR BRICK/STONE AREA

Source: Property record card or exterior inspection

Required: For all principal buildings

Data type: Numeric

Determine the number of square feet of wall area that is solid, veneer brick or stone. Enter as a whole number, right-justified. If none, enter "0".

The typical wall height from the basement foundation or normal ground line to the normal eave line is 9 feet. Half stories are usually 6 feet in height and full upper stories are usually 8 feet.

***Note: In order to accurately value Class C Brick and Class D Veneer structures it is necessary to include the total square feet of brick or veneer area in the Exterior Brick/Stone Area. You can arrive at this square foot value by using the formula (Area = Perimeter x wall height of brick or veneer).

Error Printout Explanation:

Error Message: W 518-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 518 (Ornamental Exterior Brick/Stone Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 518 (Ornamental Exterior Brick/Stone Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 518 (Ornamental Exterior Brick/Stone Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Item 518. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Action Code = 4.

SOLAR COLLECTOR AREA

Source: Property record card or exterior inspection

Required: For all principal buildings with solar collector(s)

Data Type: Numeric

Enter the total square footage of the solar collector(s). Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation.

Error Printout Explanation

Error Message: W 519-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 519 (Solar Collector Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 519 (Solar Collector Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 519 (Solar Collector Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Solar Collector Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 519 (Solar Collector Area) Action Code = 4.

Error Message: W 519-CANNOT BE GREATER THAN ZERO IF 525 NOT EQUAL 2 OR 5, ZERO ASSUMED

Cause: Solar Collector Area cannot be coded if the Heating System is not equal to hot water (2), or forced hot air (5).

Action: Item update Item 525 (Heating System) to either 2 or 5 if Solar Collector Area is to be valued as the Heating System.

Description: The system is required to determine whether the Solar Collector System is a liquid transfer or an air transfer process. For this reason the system requires that either Hot Water or Forced Hot Air be coded in Item 525. Without the proper information coded in 525 the system cannot properly value the Solar Collector Area. If you want to use Solar Collector Area as a principal heating source, item update Item 519 (Solar Collector Area) and Item 525 (Heating System). If Solar Collector Area is not going to be used as a primary heating system no further action is necessary.

BASEMENT AREA

Source: Property record card or interior inspection

Required: For all principal buildings

Data type: Numeric

Enter the total square footage of basement area including basement garages, right-justified. Do not assume that the basement area is the same as first floor area.

Sub-basements and basements with dirt floors are not included. The latter areas must be included as a Flat Add Cost (Item 560). If there is no resulting basement area, enter zero.

Error Printout Explanation:

Error Message: W 520-BLANK OR NON-NUMERIC, FINISHED BASEMENT AREA ASSUMED

Cause: Item 520 (Basement Area) was coded with a blank or non-numeric value.

Action: Item update Item 520 (Basement Area) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found Basement Area was not coded or was coded with a non-numeric value. The system also found that Finished Basement Area (Item 521) was coded greater than zero. The system assumed that the Basement Area had to be at least as large as the Finished Basement Area, so it assumed the square foot value listed for the Finished Basement Area. If your Finished Basement Area (Item 521) was only a portion of the total Basement Area you will have to item update Item 520 (Basement Area) with the total square foot area. If your Finished Basement Area included the total Basement Area no action is necessary since the system has assumed the correct value for Item 520 (Basement Area).

Error Message: W 520-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 520 (Basement Area) was coded or punched with a blank or non-numeric value, when Finished Basement was coded blank or zero.

Action: Item update Item 520 (Basement Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 520 (Basement Area) was either left blank or was coded with a non-numeric value when Finished Basement was coded blank or zero. The system assumed a value of zeros for Basement Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 520 (Basement Area) Action Code = 4.

Error Message: W 520-BASEMENT AREA GREATER THAN 1ST FLOOR AREA

Cause: Item 520 (Basement Area) was coded greater than Item 541 (First Floor Area).

Action: No action is necessary if your coding for Basement Area (Item 520) is correct. If your coding is not correct item update Action Code = 4.

Description: The system is providing a warning that your coding appears inconsistent. It is possible to have a Basement Area greater than your First Floor Area but it is unusual. The system is only bringing this situation to your attention in case of an error in coding. If no coding error is present then no action is necessary. If a coding error is found item update either Item 520 (Basement Area) or Item 541 (First Floor Area). Check your coding.

FINISHED BASEMENT AREA

Source: Property record card or interior inspection

Required: For all principal buildings with basements

Data type: Numeric

Enter the total square footage of finished basement area, right-justified. If the basement is completely unfinished, enter zero. If there is no basement as defined in Item 520, enter zero.

Error Printout Explanation:

Error Message: W 521-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 521 (Finished Basement Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 521 (Finished Basement Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 521 (Finished Basement Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Finished Basement Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update (Item 521) Finished Basement Area Action Code = 4.

Error Message: W 521-CANNOT BE GREATER THAN BASEMENT AREA, BASEMENT AREA ASSUMED

Cause: Item 521 (Finished Basement Area) was coded with a value which was greater than the value coded for Item 520 (Basement Area).

Action: Item update Finished Basement Area (Item 521) Action Code = 4 if the assumed value of Basement Area (Item 520) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the Square Foot Area that you coded for Finished Basement Area (Item 521) exceeded the Square Foot Area that you coded for Item 520 (Basement Area). Since this situation is impossible, the system decided to assume the square foot area in (Item 520) Basement Area for Item 521 (Finished Basement Area). If the assumed value is incorrect you should thoroughly check your records and item update either Item 520 (Basement Area) or Item 521 (Finished Basement Area) or both. If the assumed square foot value is correct no action is necessary.

FINISHED BASEMENT QUALITY GRADE DIFFERENCE

Source: Property record card or interior inspection

Required: For all principal buildings with finished basement areas

Data type: Signed numeric

Primary concern is given to the quality of workmanship and material in the finished part of the basement in comparison to the rest of the building. If the quality is the same, enter "00". If the quality of the finished basement is less than the quality of the main part of the building, enter a "-" in the left-hand column and your estimate of the quality percent difference in the right-hand column. If the quality of the finished basement is more than the quality of the main part of the building, enter a "+" in the left-hand column and your estimate of the additional quality in terms of a percentage in the right-hand column. Unless otherwise indicated, enter "00".

If there is no basement as defined in Item 520, or the basement is completely unfinished, enter zero.

Error Printout Explanation:

Error Message: W 522-MUST BE ZERO WHEN 521 EQUALS 0, ZEROS ASSUMED

Cause: Item 522 (Finished Basement Quality Grade Difference) was coded greater than zero when Item 521 (Finished Basement Area) was coded zero.

Action: No action is necessary if the zero assumed Quality Grade Difference is correct; otherwise item update Item 521 (Finished Basement Area) and Item 522 (Finished Basement Quality Grade Difference) Action Code = 4.

Description: The system found that the coding for Item 522 (Finished Basement Quality Grade Difference) conflicted with the coding for Item 521 (Finished Basement Area). Since no Finished Basement Area was coded the system determined that no Finished Basement Quality Grade Difference could exist. It assumed a value of zero for Finished Basement Quality Grade Difference. If the assumption is correct no action is necessary. If the assumption is not correct then review your records and item update both Item 521 (Finished Basement Area) and Item 522 (Finished Basement Quality Grade Difference).

Error Message: W 522-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 522 (Finished Basement Quality Grade Difference) was coded or punched with a blank or non-numeric value.

Action: Item update Item 522 (Finished Basement Quality Grade Difference) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 522 (Finished Basement Quality Grade Difference) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Item 522. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 522 (Basement Quality Grade Difference) Action Code = 4.

DAYLIGHT BASEMENT

Source: Property record card or exterior inspection

Required: For all principal buildings with basements

Data type: Coded

Enter a "1" if the building contains a daylight basement, a "0" if it does not. To qualify as a daylight basement, the major portion of at least one wall must be exposed and the outside entrance must be at ground level or above. In most instances, daylight basements will be located on hillsides and sloping or terraced parcels.

If the building contains no basement as defined in Item 520, enter zero.

Error Printout Explanation:

Error Message: W 523-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 523 (Daylight Basement) was coded or punched with a blank or non-numeric value.

Action: Item update Item 523 (Daylight Basement) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 523 (Daylight Basement) was either left blank or was coded with a non-numeric value. The system assumed a value of No (0) for Daylight Basement. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 523 (Daylight Basement) Action Code = 4.

Error Message: W 523-OUT OF RANGE, ZEROS ASSUMED

Cause: The value coded for Item 523 (Daylight Basement) is not within the valid range of responses.

Action: Item update Item 523 (Daylight Basement) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 523 (Daylight Basement) was not one of the possible valid responses. The valid responses for Item 523 range from 0 to 1. The system assumed a value of No Daylight Basement because that is a typical response. If No (0) is not an accurate response then item update the Parcel Action Code = 4. If no Daylight Basement is an accurate response then no action is necessary.

HEATING SOURCE

Source: Property record card or interior inspection

Required: For all principal buildings

Data type: Coded

Determine the predominant heating source for the structure, select its code from the table below and enter the code on the form.

0	No heating system (the only heat is derived from a fireplace, a freestanding space heater or a cook stove)
1	Coal
2	Oil
3	Gas (either natural gas or liquified petroleum gas)
4	Electricity
5	Solar
6	Wood (not to be confused with #1 above)
7	Geothermal

Error Printout Explanation:

Error Message: W 524-BLANK OR NON-NUMERIC WHEN 549 IS GREATER THAN 0, 3 ASSUMED

Cause: Item 524 (Heating Source) was coded or punched with a blank or non-numeric value, when Heated Area (Item 549) was coded.

Action: Item update Item 524 (Heating Source) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 524 (Heating Source) was either left blank or was coded with a non-numeric value when Item 549 (Heated Area) was coded greater than zero. The system assumed a value of Gas (3) for Heating Source. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 524 (Heating Source) Action Code = 4; and check to ensure that the value coded in Item 549 (Heated Area) is correct.

Error Message: W 524-BLANK OR NON-NUMERIC, 3 ASSUMED

Cause: Item 524 (Heating Source) was coded or punched with a blank or non-numeric value.

Action: Item update Item 524 (Heating Soruce) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 524 (Heating Source) was either left blank or was coded with a non-numeric value. The system assumed a value of Gas (3) for Heating Source. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 524 (Heating Source) Action Code = 4.

Error Message: W 524-OUT OF RANGE, 3 ASSUMED

Cause: The value coded for Item 524 (Heating Source) is not within the valid range of responses.

Action: Item update Item 524 (Heating Source) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 524 (Heating Source) was not one of the possible valid responses. The valid responses for Item 524 range from 0 to 7. The system assumed a value of Gas (3) because that is a typical response. If Gas is not an accurate response then item update the Parcel Action Code = 4. If Gas is an accurate response then no action is necessary.

HEATING SYSTEM

Source: Property record card or interior inspection

Required: For all principal buildings with heat

Data type: Coded, numeric

Determine the predominant system for distribution of heat within the building. Disregard supplemental heating such as an electric baseboard unit in an isolated room or addition. Enter as follows:

0 No heating system.
1 The heating system is a floor or wall furnace.
2 The system employs hot water to distribute the heat by baseboard or radiators.
3 The system employs steam to distribute the heat by baseboard or radiators.
4 The system has ducts but no means other than gravity flow to distribute the heat (gravity hot air).
5 The system is a cabinet type that uses a fan to distribute the heat (forced hot air).
6 The system uses hot water, electric radiant coils, or heat pump.
7 The system employs electric baseboard panels.
8 The system has package air conditioning.
9 Warm and cool air = gas fired forced hot air with gas or electric refrigerated cooling.

Error Printout Explanation:

Error Message: W 525-BLANK OR NON-NUMERIC, 5 ASSUMED

Cause: Item 525 (Heating System) was coded or punched with a blank or non-numeric value.

Action: Item update Item 525 (Heating System) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 525 (Heating System) was either left blank or was coded with a non-numeric value. The system assumed a value of Forced Hot Air (5) for Heating System. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 525 (Heating System) Action Code = 4.

Error Message: E 525-MUST BE ZERO WHEN 525 = ZERO, ZEROS ASSUMED

Cause: Heating Source (Item 524) was coded zero while Heating System (Item 525) was coded greater than zero.

Action: No action is necessary if the assumed value of zero is correct. If the assumed value is not correct item update Item 524 (Heating Source) and Item 525 (Heating System).

Description: The system found that the coding for Item 524 (Heating Source) and Item 525 (Heating System) conflict each other. Item 524 (Heating Source) has been coded as 0 or no heating source, while Item 525 (Heating System) was coded one of the values between 1 and 7 suggesting that a Heating System exists. The system assumed a value of zero for Heating System (Item 525) since no heating source existed. If the assumed value is correct no action is necessary. If the assumed value is not correct check your records and item update Item 524 (Heating Source) and Item 525 (Heating System) Action Code = 4.

Error Message: E 525-BLANK OR NON-NUMERIC, 5 ASSUMED

Cause: The value coded for Item 525 (Heating System) is not within the valid range of responses.

Action: Item update Item 525 (Heating System) if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that the value coded for Item 525 (Heating System) was either left blank or was not one of the possible valid responses. The valid responses for Item 525 range from 0 to 9. ***Note: This message will be issued when you code a zero if Heating Source (Item 524) has not been coded zero. Heating System can only be coded zero when Heating Source (Item 524) has been coded zero. The system assumed a value of Forced Hot Air because that is a typical response. If Forced Hot Air is not an accurate response then item update the parcel Action Code = 4. If Forced Hot Air is an accurate response then no action is necessary.

Error Message: E 525-MUST BE CODED GREATER THAN ZERO WHEN 524 IS GREATER THAN ZERO, 5 ASSUMED

Cause: Heating System (Item 525) was coded with a valid system but Heating Source (Item 524) was coded = 0.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct item update Items 524 and 525 as necessary Action Code = 4.

Description: The system found that a Heating Source (Item 525) has been coded but a Heating System (Item 524) has not been coded. It appears inconsistent to have a Heating Source and no Heating System. The computer system determined that the assumed value of Forced Hot Air would be the most logical assumption to make in this case. You should check your records to correctly identify the Heating Source and Heating System. If the assumption of Forced Hot Air is correct then no action is necessary. If the assumption of Forced Hot Air is not correct then item update Item 524 (Heating Source) and Item 525 (Heating System) as necessary.

CENTRAL AIR COOLING SYSTEM

Source: Property record card or interior inspection

Required: For all principal buildings with ducted heat

Data type: Coded

For those buildings with ducted heat enter "1" if the ducts also distribute centrally cooled air and a "0" if not. For buildings without ducted heat, code the column zero. Do not consider window coolers, freestanding or other air conditioning units. It is assumed that the centrally cooled area is identical to the heated area.

Error Printout Explanation:

Error Message: W 526-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 526 (Central Air Cooling) was coded or punched with a blank or non-numeric value.

Action: Item update Item 526 (Central Air Cooling) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 526 (Central Air Cooling) was either left blank or was coded with a non-numeric value. The system assumed a value of No (0) for Central Air Cooling. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Central Air Cooling Action Code = 4.

Error Message: W 526-OUT OF RANGE, ZEROS ASSUMED

Cause: The value coded for Item 526 (Central Air Cooling) is not within the valid range of responses.

Action: Item update Item 526 (Central Air Cooling) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 526 (Central Air Cooling) was not one of the possible valid responses. The valid responses for Item 526 range from 0 to 1. The system assumed a value of No (0) because that is a typical response. If No is not an accurate response them item update the Parcel Action Code = 4. If No is an accurate response then no action is necessary.

ADEQUATE ELECTRICITY

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Coded

Enter a "1" if the building is wired for electricity, with a more or less normal number and type of outlets for its quality grade. Enter a "0" if the building is not wired for electricity, or it is but the number and type of outlets is seriously deficient for its quality grade.

Error Printout Explanation:

Error Message: W 527-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 527 (Adequate Electricity) was coded or punched with a blank or non-numeric value.

Action: Item update Item 527 (Adequate Electricity) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 527 (Adequate Electricity) was either left blank or was coded with a non-numeric value. The system assumed a value of Yes (1) for Item 527. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 527 (Adequate Electricity) Action Code = 4.

Error Message: W 527-OUT OF RANGE, 1 ASSUMED

Cause: The value coded for Item 527 (Adequate Electricity) is not within the valid range of responses.

Action: Item update Item 527 (Adequate Electricity) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 527 (Adequate Electricity) was not one of the possible valid responses. The valid responses for Item 527 range from 0 to 1. The system assumed a value of Yes (1) because that is a typical response. If Yes is not an accurate response then item update the Parcel Action Code = 4. If Yes is an accurate response then no action is necessary

LIVING ROOMS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data Type: Numeric

A living room is generally the room used for the common social activities of the occupants. Although this data field has two positions, only the second position should be used. The first position should be zero filled.

*Note living rooms is not total rooms.

Error Printout Explanation

Error Message: W 528-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 528 (Living Rooms) was coded or punched with a blank or non-numeric value.

Action: Item update Item 528 (Living Rooms) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 528 (Living Rooms) was either left blank or was coded with a non-numeric value. The system assumed a value of One (1) for Living Rooms. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 528 (Living Rooms) Action Code = 4.

Error Message: W 528-GREATER THAN 2

Cause: Item 528 (Living Rooms) was coded greater than 2.

Action: Item update Living Rooms Action Code = 4 if the value coded is in error.

Description: The system found that Item 528 (Living Rooms) was coded greater than 2. It is unusual to find a residential structure with more than two Living Rooms. The system issued this warning to bring your attention to this situation. If the coding for Item 528 (Living Rooms) is in error you should item update the total number of Living Rooms Action Code = 4.

DINING ROOMS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Count only those dining rooms distinct and apart from kitchens and living rooms. Do not count a small ell off the kitchen or living room as a dining room. However, in some cases where the ell is large enough to serve as a dining room without the dining activities extending into the other living areas, the ell should be counted as a dining room. Where there is no dining room, enter a "0".

Error Printout Explanation

Error Message: W 529-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 529 (Dining Rooms) was coded or punched with a blank or non-numeric value.

Action: Item update Item 529 (Dining rooms) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 529 (Dining rooms) was either left blank or was coded with a non-numeric value. The system assumed a value of One (1) for Dining Rooms. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 529 (Dining Rooms) Action Code = 4.

Error Message: W 529-GREATER THAN 2

Cause: Item 529 Dining Rooms was coded greater than 2.

Action: Item update Dining Rooms (Item 529) if the coding is in error.

Description: The system felt that 3 or more dining rooms in a residential structure was inconsistent with the typical residential property. The system has issued the above warning message to bring this inconsistency to your attention. You should item update Item 529 (Dining Rooms) Action Code = 4 if your coding is incorrect. If your coding is correct no action is necessary.

FAMILY/DEN/RECREATION ROOMS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Count all rooms classified as family rooms, dens and recreation rooms. These can be located on any floor or in the basement.

Do not count bedrooms being used as any of the above. If a room meets the standards for a bedroom, i.e., privacy, closet, window, access to a bath, and obviously was intended at construction to be a bedroom, then it is counted as a bedroom. Do not count living rooms in this item, living rooms should be accounted for under Item 528.

Enter the number of family rooms, dens and recreation rooms in this item. Enter "0" if none.

Error Printout Explanation

Error Message: W 530-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 530 (Family/Den/Recreation Rooms) was coded or punched with a blank or non-numeric value.

Action: Item update Item 530 (Family/Den/Recreation Rooms) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 530 (Family/Den/Recreation Rooms) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Family/Den/Recreation Rooms. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 530 (Family/Den/Recreation Rooms) Action Code = 4.

BEDROOMS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Count each independent area that has a privacy door and a reach-in or walk-in closet for clothes storage. The intended use and design of the room must primarily be for sleeping purposes.

Even if such a room is currently being used as a sewing, TV or family room, etc., it should be counted as a bedroom.

In a one room cabin, the one room is considered to be a living room not a bedroom.

Enter the number of bedrooms, right-justified. Enter "0" if none.

Error Printout Explanation

Error Message: W 531-BLANK OR NON-NUMERIC, 3 ASSUMED

Cause: Item 531 (Bedrooms) was coded or punched with a blank or non-numeric value.

Action: Item update Item 531 (Bedrooms) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 531 (Bedrooms) was either left blank or was coded with a non-numeric value. The system assumed a value of Three (3) for Bedrooms. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 531 (Bedrooms) Action Code = 4.

KITCHENS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Count the number of kitchens. To be a kitchen. a room must have the utility connections required for a stove, refrigerator, sink, etc. Enter the total in this Item. Enter "0" if none.

Error Printout Explanation

Error Message: W 532-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 532 (Kitchens) was coded or punched with a blank or non-numeric value.

Action: Item update Item 513 (Kitchens) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 532 (Kitchens) was either left blank or was coded with a non-numeric value. The system assumed a value of One (1) for Kitchens. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 532 (Kitchens) Action Code = 4.

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the total number of built-in appliances, right-justified. Enter "0" if none. Count the following appliances as built-in when attached to the building in a permanent fashion:

Range and oven	Barbecue
Double oven	Vacuum outlets
Disposal	Intercom system
Fan and hood	Stereo system
Dishwasher	Appliance island
Trash Compactor	Bar refrigerator
Freezer	Mixer-Blender

Judgement must be used for other appliances.

Error Printout Explanation:

Error Message: W 533-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 533 (Built-Ins) was coded or punched with a blank or non-numeric value.

Action: Item update Item 533 (Built-Ins) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 533 (Built-Ins) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Built-Ins. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 533 (Built-Ins) Action Code = 4.

FULL BATHS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

A full bath includes a toilet, a lavatory and a bathtub with or without an overhead shower. A stall shower may be substituted for the bathtub. Enter the total number of full baths. Enter zero if none.

All plumbing fixtures are to be listed. The calculation methodology including the formulas used to calculate plumbing costs and the number of fixtures included in the base for each quality grade of structure are as follows.

The basic approach in calculating plumbing costs is to determine the number of plumbing fixtures coded on the RDCF and subtract the number of plumbing fixtures included in the base. The resulting number of fixtures either + or - are then multiplied by the cost per fixture with the resulting value added to or subtracted from the base. The number of fixtures contained in the structure is determined from the RDCF as follows:

Formula: 534 (Full Baths) x 3 (fixtures)
+ 535 (Half Baths) x 2 (fixtures)
+ 536 (Hot Water Heaters)
+ 537 (Kitchen Sinks)
+ 538 (Other Single Fixtures) = Total Fixtures

The number of fixtures included in the base for each grade follows:

Grade	Full Bath Fixtures	Half Baths	Water Heaters	Kitchen Sinks	Other Single Fix.
IF1	0	0	0	0	0
IF2	0	2	1	1	0
IF3	3	0	1	1	0
IF4	3	0	1	1	0
IF5	3 fixtures/3 bedrooms	0	1	1	0
IF6	3 fixtures/2 bedrooms	0	1	1	0
IF7	3 fixtures/1 bedroom	0	1	1	0
IF8	3 fixtures/1 bedroom	0	1	1	3

Formulas for Fixture Calculation by Grade

1F-1 Fixture Calculation

(Total fixtures on RDCF) - (Fixtures included in base (0)) = Total Fixtures
(Total Fixtures x $213.00) x Grade Variation (Item 506) = Plumbing Cost

1F-2 Fixture Calculation

(Total fixtures on RDCF) - (Fixtures included in base (4)) = Total Fixtures
(Total Fixtures x $237.00) x Grade Variation (Item 506) = Plumbing Cost

1F-3 Fixture Calculation

(Total fixtures on RDCF) - (Fixtures included in base (5)) = Total Fixtures
(Total Fixtures x $261.00) x Grade Variation (Item 506) = Plumbing Cost

1F-4 Fixture Calculation

(Total fixtures on RDCF) - (Fixtures included in base (5)) = Total Fixtures
(Total Fixtures x $286.00) x Grade Variation (Item 506) = Plumbing Cost

1F-5 Fixture Calculation

(Total fixtures on RDCF) - [(Bedrooms (531) x 3 Fixtures) ÷ 3 Bedrooms in Base + (2 Fixtures in Base) (Includes Hot Water Heater and Kitchen Sink)] = Total Fixtures

(Total Fixtures x $309.00) x Grade Variation (Item 506) = Plumbing Cost

1F-6 Fixture Calculation

(Total fixtures on RDCF) - [(Bedrooms (531) x 3 Fixtures) ÷ 2 Bedrooms in Base + (2 Fixtures in Base) (Includes Hot Water Heater and Kitchen Sink, Other Single Fixture)] = Total Fixtures

(Total Fixtures x $336.00) x Grade Variation (Item 506) = Plumbing Cost

1F-7 Fixture Calculation

(Total fixtures on RDCF) - [(Bedrooms (531) x 3 Fixtures) ÷ 1 Bedrooms in Base + (2 Fixtures in Base) (Includes Hot Water Heater and Kitchen Sink, Other Single Fixture)] = Total Fixtures

(Total Fixtures x $362.00) x Grade Variation (Item 506) = Plumbing Cost

1F-8 Fixture Calculation

(Total fixtures on RDCF) - [(Bedrooms (531) x 3 Fixtures) ÷ 1 Bedrooms in Base + (5 Fixtures in Base) (Includes Hot Water Heater and Kitchen Sink, 4 Other Single Fixtures)] = Total Fixtures

(Total Fixtures x $394.00) x Grade Variation (Item 506) = Plumbing Cost

Low Cost Mobile Home Fixture Calculation

(Total fixtures on RDCF) - 6 Fixtures (Includes Full Bath, Kitchen Sink, Hot Water, 1 Other Single Fixture)] =Total Fixtures

(Total Fixtures x $225.00) x Grade Variation (Item 506) = Plumbing Cost

Average Cost Mobile Home Fixture Calculation

(Total fixtures on RDCF) - 8 Fixtures (Includes Bath Fixtures, Kitchen Sink, Hot Water) =Total Fixtures

(Total Fixtures x $280.00) x Grade Variation (Item 506) = Plumbing Cost

Good Cost Mobile Home Fixture Calculation

(Total fixtures on RDCF) - 9 Fixtures (Includes Bath Fixtures, Kitchen Sink, Hot Water Heater) =Total Fixtures

(Total Fixtures x $345.00) x Grade Variation (Item 506) = Plumbing Cost

Excellent Cost Mobile Home Fixture Calculation

(Total fixtures on RDCF) - 10 Fixtures (Includes Bath Fixtures, Kitchen Sink, Hot Water Heater, Other Single Fixtures) = Total Fixtures

(Total Fixtures x $425.00) x Grade Variation (Item 506) = Plumbing Cost

Error Printout Explanation:

Error Message: W 534-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 534 (Full Baths) was coded or punched with a blank or non-numeric value, when Quality Grade Item 505 is greater than 2.

Action: Item Update Item 534 (Full Baths) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 534 (Full Baths) was either left blank or was coded with a non-numeric value, when the Quality Grade of the structure was coded 3 through 8. The system assumed a value of One (1) for Full Baths. If the assumed value is correct no action is necessary. If the assumed value is not correct then Item Update Item 534 (Full Baths) Action Code = 4.

Error Message: W 534-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 534 (Full Baths) was coded or punched with a blank or non-numeric value, when Quality Grade = 1 or 2.

Action: Item update Item 534 (Full Baths) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 534 (Full Baths) was either left blank or was coded with a non-numeric value when Quality Grade was coded equal to 1 or 2. The system assumed a value of Zero for Full Baths. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 534 (Full Baths) Action Code = 4.

HALF BATHS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

A half bath includes only a toilet and lavatory. Enter the total number of half baths. Enter zero if none.

All plumbing fixtures are to be listed. The plumbing fixtures included in the base cost of each grade of residence is shown under Full Baths (Item 534).

Error Printout Explanation:

Error Message: W 535-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 535 (Half Baths) was coded or punched with a blank or non-numeric value,

Action: Item update Item 535 (Half Baths) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 535 (Half Baths) was either left blank or was coded with a non-numeric value. The system also found that Full Baths was coded with zero. If both Half Baths and Full Baths are not coded then it would be indicated that no baths are present. The system assumed a value of One for Half Baths. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 535 (Half Baths) Action Code = 4.

Error Message: W 535-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 535 (Half Baths) was coded or punched with a blank or non-numeric value,

Action: Item update Item 535 (Half Baths) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 535 (Half Baths) was either left blank or was coded with a non-numeric value. Since Full Baths was coded the system assumed a value of Zero for Half Baths. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 535 (Half Baths) Action Code = 4.

HOT WATER HEATER

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the total number of hot water heaters. If none, enter "0".

All plumbing fixtures are to be listed. The plumbing fixtures included in the base cost of each grade of residence is shown under Full Baths (Item 534).

Error Printout Explanation:

Error Message: W 536-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 536 (Hot Water Heater) was coded or punched with a blank or non-numeric value.

Action: Item update Item 536 (Hot Water Heater) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 536 (Hot Water Heater) was either left blank or was coded with a non-numeric value. The system assumed a value of One (1) for Hot Water Heater. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 536 (Hot Water Heater) Action Code = 4.

Error Message: W 536-GREATER THAN 2

Cause: Hot Water Heater (Item 536) was coded 3 or more.

Action: Item update Item 536 Action Code = 4 if the data coded is not correct. If the data coded is correct no action is necessary.

Description: The system found that three or more Hot Water Heaters were coded in Item 536 (Hot Water Heater). Since this is a residential property it would seem unusual to have 3 or more hot water heaters. The system wanted to make you aware that this data had been coded. If the information is incorrect then item update Item 536 (Hot Water Heater) Action Code = 4. If the information is correct then no action is necessary.

KITCHEN SINKS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the total number of kitchen sinks. Count a double sink as one sink. If there are no kitchen sinks, enter "0".

All plumbing fixtures are to be listed. The plumbing fixtures included in the base cost of each grade of residence is shown under Full Baths (Item 534).

Error Printout Explanation:

Error Message: W 537-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 537 (Kitchen Sinks) was coded or punched with a blank or non-numeric value.

Action: Item update Item 537 (Kitchen Sinks) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 537 (Kitchen Sinks) was either left blank or was coded with a non-numeric value. The system assumed a value of One (1) for Kitchen Sinks. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 537 (Kitchen Sinks) Action Code = 4.

Error Message: W 537-GREATER THAN 2

Cause: Item 537 (Kitchen Sinks) was coded greater than 2.

Action: Item update Item 537 (Kitchen Sinks) Action Code = 2 if the coded information is not accurate. If the assumed value is correct then no action is necessary.

Description: The system found that 3 or more kitchen sinks were coded in Item 537 (Kitchen Sinks). The system felt that it was unusual for the typical residential property to have more than 2 kitchen sinks. The system issued the above message to inform you that 3 or more kitchen sinks have been coded. Item update Item 537 (Kitchen Sinks) Action Code = 4 if the coded information is in error. If the coded information is not in error no action is necessary.

OTHER SINGLE FIXTURES

Source: Property record card, interior inspection, questionnaire

Required: For all structures coded SFR or MOB

Data type: Numeric

Count the total number of single plumbing fixtures not counted in full baths, half baths, hot water heaters and kitchen sinks. Include laundry tubs or connections (water and drain) for automatic washer hookup, but not as two fixtures where both are present. Include single toilets, single lavatories, single bathtubs and showers, wet bars and sinks in recreation areas. Add one fixture for each roughed in bathroom.

Enter the total number of the above fixtures. If none, enter "0".

All plumbing fixtures are to be listed. The plumbing fixtures included in the base cost of each grade of residence is shown under Full Baths (Item 534).

Error Printout Explanation:

Error Message: W 538-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 538 (Other Single Fixtures) was coded or punched with a blank or non-numeric value.

Action: Item update Item 538 (Other Single Fixtures) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 538 (Other Single Fixtures) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Other Single Fixtures. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 538 (Other Single Fixtures) Action Code = 4.

UTILITY TYPE ROOMS

Source: Interior inspection or questionnaire

Required: For all principal buildings

Data type: Numeric

A utility room must be large enough to be used independently of other rooms. Large accessory closets being used for utility purposes, and hallways with washer and dryer connections, should not be considered utility rooms. Storage rooms should be listed as utility rooms even though they may be large enough to serve as a sleeping space. However, rooms being used for storage or utility purposes but which have all the amenities of bedrooms should be rated as bedrooms (see Item 531).

Laundry connections in dens, recreation rooms, family rooms or bedrooms do not necessarily qualify them to be rated as utility rooms. Such rooms should be rated according to their most appropriate purpose. Do not count kitchens as utility rooms.

Count the number of utility rooms and enter in this item. Enter "0" if none.

Error Printout Explanation

Error Message: W 539-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 539 (Utility Type Rooms) was coded or punched with a blank or non-numeric value.

Action: Item update Item 539 (Utility Type Rooms) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 539 (Utility Type Rooms) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Utility Type Rooms. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 539 (Utility Type Rooms) Action Code = 4.

MOBILE HOME WIDTH

Source: Assessment records, movement declarations, property record cards, or exterior inspection

Required: For all mobile home valuations

Data Type: Coded in lineal feet; numeric

Mobile home width is determined by outside measurement of one of the two equal, shortest sections of perimeter footage.

Error Printout Explanation:

Error Message: E 540-MUST BE CODED IF 501 = "MOB", 0 ASSUMED

Cause: Item 540 (Mobile Home Width) is either non-numeric or is coded zero when Item 501 (Structure Code) = MOB.

Action: Item update Item 540 (Mobile Home Width) Action Code = 4.

Description: The system found that Item 540 (Mobile Home Width) was coded with a non-numeric value or was coded zero when Structure Code (Item 501) was equal to "MOB". If your structure is a mobile home then the width must be provided. If no width is provided no calculation can be performed, and no cost computation can be generated. You should check your records to see what the width of the mobile home is and item update Action Code = 4 Item 540 (Mobile Home Width). If Item 501 (Structure Code) is in error item update Structure Code Action Code = 4.

Error Message: W 540-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 540 (Mobile Home Width) was coded or punched with a blank or non-numeric value, when Structure Code (Item 501) was not equal to "MOB".

Action: Item update Item 540 (Mobile Home Width) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 540 (Mobile Home Width) was either left blank or was coded with a non-numeric value when Structure Code was coded something other than "MOB". The system assumed a value of zero for Mobile Home Width. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 540 (Mobile Home Width) Action Code = 4. You should check your coding for Item 501 (Structure Code).

Error Message: W 540-501 NOT EQUAL MOB, ZEROS ASSUMED

Cause: Item 501 (Structure Code) was not coded MOB while a Mobile Home Width (Item 540) was coded.

Action: No action is necessary if the assumed value of zero is correct. If the assumed value is not correct item update Item 501 (Structure Code) and Item 540 (Mobile Home Width) Action Code = 4.

Description: The system found that Mobile Home Width (Item 540) was coded when the Structure Code was not equal to mobile home. The system assumed that since the structure was not a mobile home no Mobile Home Width should be coded and zeros were assumed. If the assumption is incorrect you should item update both Item 501 (Structure Code) and Item 540 (Mobile Home Width) Action Code = 4. If the assumption is correct, no action is necessary.

Error Message: W 540-ROUNDED TO NEXT HIGHEST WIDTH

Cause: An odd number was coded for Mobile Home Width

Action: Item update Mobile Home Width (Item 540) Action Code = 4 if the assumed width is not correct.

Description: The system values mobile homes based upon their Quality Grade and size. Mobile Home Width (Item 540) is a critical part of the calculation to value a mobile home. The Mobile Home Valuation Schedules are based upon even widths so the system must ensure that the width coded in Item 540 is an even number. In order to ensure that the width in Item 540 (Mobile Home Width) is even the system divides the coded value by 2. If the result of that calculation provides a decimal value greater than zero the system adds 1 foot to the width to make the width even. If the decimal value is even no change is made to the width. i.e. 15 ÷ 2 = 7.5, 16 feet assumed, 14 ÷ 2 = 7.0 - no change in width. If the assumed calculated width is incorrect you should item update Item 540 Action Code = 4. If the assumed value is correct no action is necessary.

Error Mwssage: W 540 EXCEEDS 28 FEET, 28 ASSUMED

Cause: The data coded for Item 540 (Mobile Home Width) exceeds 28 feet.

Action: Item update Action Code = 4 Item 540 (Mobile Home Width) if the assumed value of 28 feet is not correct.

Description: The tables used to value mobile homes can only calculate mobile homes up to 28 feet in width. If you have coded a Mobile Home Width in excess of 28 feet then the system will assume a value of 28 feet. If the assumption is not correct item update the parcel Action Code = 4. If the assumed value is correct no action is necessary. If you have a mobile home which exceeds 28 feet in width call the Helena Office.

FIRST FLOOR AREA

Source: Property record card

Required: For all principal buildings

Data type: Numeric

Enter the total square footage of the first floor of the building, right-justified.

Error Printout Explanation:

Error Message: W 541-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 541 (First Floor Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 541 (First Floor Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 541 (First Floor Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for First Floor Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 541 (First Floor Area) Action Code = 4.

UPPER FLOOR AREA

Source: Property record card

Required: For all principal buildings

Data type: Numeric

Enter the total square footage in all full stories above the main (first) floor, right-justified. If the building has only one full story, enter zero.

Error Printout Explanation:

Error Message: W 542-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 542 (Upper Floor Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 542 (Upper Floor Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 542 (Upper Floor Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Upper Floor Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 542 (Upper Floor Area) and Item 512 (Stories) Action Code = 4.

Error Message: W 542-CANNOT BE GREATER THAN ZERO WHEN STORIES IS LESS THAN 2, ZEROS ASSUMED

Cause: Item 542 (Upper Floor Area) was coded when Item 512 (Stories) was less than 2.0

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then item update Item 512 (Stories) and Item 542 (Upper Floor Area) Action Code = 4.

Description: The system found that Item 542 was coded indicating that Upper Floor Area existed in the structure but Item 512 (Stories) was coded 1.5 or less indicating that no Upper Floor existed. The system assumed a value of Zero for Upper Floor Area. If the zero assumed value is correct then no action is necessary. If the zero assumed value is not correct then item update Item 512 (Stories) and Item 542 (Upper Floor Area) Action Code = 4.

UNFINISHED FLOOR AREA

Source: Property record card or interior inspection

Required: For all principal buildings

Data type: Numeric

Enter the total square footage of unfinished floor area in all full upper stories, right-justified. Do not include unfinished areas in any basement, half story or attic. If all upper stories are completely finished, enter zero.

Error Printout Explanation:

Error Message: W 543-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 543 (Unfinished Floor Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 543 (Unfinished Floor Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 543 (Unfinished Floor Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Unfinished Floor Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 543 (Unfinished Floor Area) Action Code = 4.

Error Message: W 543-MUST EQUAL ZERO IF 542 EQUALS ZERO, ZEROS ASSUMED

Cause: Item 543 (Unfinished Floor Area) was coded greater than zeros while Upper Floor Area was equal to zero.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then item update Item 542 (Upper Floor Area) and Item 543 (Unfinished Floor Area) Action Code = 4.

Description: The system found that Item 543 (Unfinished Floor Area) was coded greater than zeros which suggests that Item 542 (Upper Floor Area) should be coded. Item 542 (Upper Floor Area) was not coded and conflicts with Item 543 (Unfinished Floor Area). The system assumed zero for Unfinished Floor Area (Item 543). If the zero assumed value is correct no action is necessary. If the zero assumed value is not correct then item update Item 542 (Upper Floor Area) and Item 543 (Unfinished Floor Area) Action Code = 4.

Error Message: W 543-CANNOT BE GREATER THAN 1ST FLOOR + UPPER FLOOR, CALC AREA ASSUMED

Cause: Item 543 (Unfinished Floor Area) is greater than the sum of the First Floor Area (Item 541) plus Upper Floor Area (Item 542).

Action: Item update Item 543 (Unfinished Floor Area) Action Code = 4 if the calculated assumed area is not correct. If the assumed area is correct no action is necessary.

Description: The system found that the area you coded in Unfinished Floor Area (Item 543) was greater than the total floor area. The total floor area is the sum of the First Floor Area (Item 541) and the Upper Floor Area (Item 542). Since the value you coded for Item 543 exceeded the sum of the First and Upper Floor Areas this error message was issued. The system assumed the sum of the First and Upper Floor Areas for Item 543 (Unfinished Floor Area). If this calculated area is incorrect item update Item 543 (Unfinished Floor Area) and check your coding for Item 541 (First Floor Area) and Item 542 (Upper Floor Area). If the assumed value is correct no action is necessary.

HALF STORY AREA

Source: Property record card or interior inspection

Required: For all principal buildings

Data type: Numeric

Enter the total floor square footage of the half story area, right-justified. See Item 512 for definition of half story. If the building has no half story, enter zero. The square foot area of the Half Story Area should be coded as the area above the Ground Floor Area. Most often the square foot of the Ground Floor Area and Half Story Area will be the same.

Error Printout Explanation:

Error Message: W 544-BLANK OR NON-NUMERIC, AND STORIES IS WHOLE, ZERO ASSUMED

Cause: Item 544 (Half Story Area) was left blank or was coded with a non-numeric variable when Item 512 (Stories) decimal position was coded 0.

Action: Item update Item 512 (Stories) and Item 544 (Half Story Area) Action Code = 4 if the zero assumed value is not correct.

Description: The system found that Item 544 (Half Story Area) was left blank or was coded zero. The system looked at Item 512 (Stories) and found that a "5" was not coded in the decimal position, which would indicate there is no half story. Assuming, based upon this information, that no half story existed, the system assumed zeros for Item 544 (Half Story Area). If the zero assumed value is not correct then item update Item 544 (Half Story Area) and Item 512 (Stories) Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 544-BLANK OR NOT NUMERIC, ZERO ASSUMED

Cause: Item 544 (Half Story Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 544 (Half Story Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 544 (Half Story Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Half Story Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 544 (Half Story Area) Action Code = 4.

Error Message: E 544-GREATER THAN ZERO WHEN DECIMAL PART OF 512 EQUALS ZERO, ZERO ASSUMED

Cause: Item 544 (Half Story Area) was coded greater than zero when the Half Story indicator decimal was equal to zero.

Action: No action is necessary if the zero assumed value is correct. If the assumed value is not correct then item update Item 512 (Stories) and Item 544 (Half Story Area) Action Code = 4.

Description: The system found that Item 544 (Half Story Area) was coded greater than zero while the half story indicator decimal in Item 512 (Stories) was equal to zero. If there is no half story then there can be no Half Story Area. The system assumed that the value for Half Story Area should be zero. If the assumed value is correct then no action is necessary. If the assumed value is not correct then item update Item 544 (Half Story Area) and Item 512 (Stories) Action Code = 4.

Error Message: E 544-EQUALS ZEROS WHEN 512 DECIMAL EQUALS .5

Cause: Item 544 (Half Story Area) equals zeros when Item 512 (Stories) decimal position equals .5.

Action: Item update Item 544 (Half Story Area) if Item 512 (Stories) is correct. If Item 512 (Stories) is not correct then item update Item 512 (Stories).

Description: The system found that Item 544 (Half Story Area) was not coded when Item 512 (Stories) decimal position was equal to 5. If there is a half story as indicated in Item 512 then a Half Story Area must be coded. Item update Item 544 (Half Story Area) Action Code = 4 or item update Item 512 (Stories) Action Code = 4 whichever is correct. When updating Item 512 (Stories) in this situation make sure to code the decimal position as zero.

UNFINISHED HALF STORY AREA

Source: Property record card or interior inspection

Required: For all principal buildings with a half story

Data type: Numeric

Enter the total square footage of unfinished floor area in the half story, right-justified. If the half story is completely finished, enter zero. If the building has no half story leave all columns blank.

Error Printout Explanation:

Error Message: W 545-BLANK OR NON-NUMERIC; ZERO ASSUMED

Cause: Item 545 (Unfinished Half Story Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 545 (Unfinished Half Story Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 545 (Unfinished Half Story Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Unfinished Half Story Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 545 (Half Story Area) Action Code = 4.

Error Message: W 545-CANNOT BE GREATER THAN HALF STORY AREA; HALF STORY AREA ASSUMED

Cause: Unfinished Half Story Area (Item 545) was coded larger than Item 544 (Half Story Area).

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct then item update the incorrect information in Item 544 (Half Story Area) and Item 545 (Unfinished Half Story Area).

Description: The system found that Item 545 (Unfinished Half Story Area) was coded greater than the value coded for Item 544 (Half Story Area). It is impossible for the Unfinished Half Story Area to be greater than the Half Story Area. The system assumed the number of square feet coded in Item 544 (Half Story Area) for Item 545 (Half Story). If the assumed value is incorrect then item update both Item 544 (Half Story Area) and Item 545 (Unfinished Half Story Area) Action Code = 4. If the assumed value is correct then no action is necessary.

ATTIC AREA

Source: Property record card or interior inspection

Required: For all principal buildings

Data type: Numeric

Enter the total floor square footage of attic floor area, right-justified. See Item 512 for definition of attic. If the building has no attic, enter zero.

Error Printout Explanation:

Error Message: W 546-BLANK OR NON-NUMERIC, FINISHED ATTIC AREA ASSUMED

Cause: Item 546 (Attic Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 546 (Attic Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 546 (Attic Area) was either left blank or was coded with a non-numeric value. The system assumed the value from Finished Attic Area for Attic Area, because it assumed that any finished Attic Area had to also be Attic Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 546 (Attic Area) Action Code = 4.

Error Message: W 546-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 546 (Attic Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 546 (Attic Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 546 (Attic Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Attic Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 546 (Attic Area) Action Code = 4.

FINISHED ATTIC AREA

Source: Property record card or interior inspection

Required: For all principal buildings with an attic

Data type: Numeric

Enter the total floor square footage of finished attic area, right-justified. If the attic is completely unfinished, enter zero. If there is no attic, enter zero.

Error Printout Explanation:

Error Message: W 547-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 547 (Finished Attic Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 547 (Finished Attic Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 547 (Finished Attic Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Finished Attic Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 547 (Finished Attic Area) Action Code = 4.

Error Message: W 547-CANNOT BE GREATER THAN ATTIC AREA, ATTIC AREA ASSUMED

Cause: Item 547 (Finished Attic Area) was coded greater than Item 546 (Attic Area).

Action: Item update Item 547 (Finished Attic Area) Action Code = 4 if the assumed value of the Attic Area is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that you coded Item 547 (Finished Attic Area) with a value greater than the value you coded for Item 546 (Attic Area). The finished portion of the attic cannot be greater than the total Attic Area. The system assumed that the total Attic Area must be finished and assumed that the Finished Area was the same square foot area as the Attic Area listed in Item 546. If the assumed value is correct no further action is necessary. If the assumed value is incorrect then you should item update both Item 546 (Attic Area) and Item 547 (Finished Attic Area) to the correct values.

FINISHED ATTIC QUALITY GRADE DIFFERENCE

Source: Property record or interior inspection

Required: For all principal buildings with finished attic area

Data type: Signed numeric

Primary concern is given to the quality of workmanship and material in the finished (part of the) attic in comparison to the rest of the building. If the quality is the same, enter "00". If the quality of the attic is less than the quality of the main part of the building, enter a "-" in the left-hand column and your estimate of the quality percent difference in the right-hand column. If the quality of the attic is more than the quality of the main part of the building, enter "+" in the left-hand column and your estimate of the additional quality in terms of a percent in the right-hand column. Unless otherwise indicated, enter "00".

If there is no attic, or the attic is completely unfinished, enter zero.

Error Printout Explanation:

Error Message: W 548-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 548 (Finished Attic Quality Grade Difference) was coded or punched with a blank or non-numeric value.

Action: Item update Item 548 (Finished Attic Quality Grade Difference) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 548 (Finished Attic Quality Grade Difference) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Item 548. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 548 (Finished Attic Quality Grade Difference) Action Code = 4.

Error Message: W 548-GREATER THAN 50%

Cause: Item 548 (Finished Attic Quality Grade Difference) was coded greater than 50%.

Action: Item update Item 548 (Finished Attic Quality Grade Difference) Action Code = 4 if the value coded was excessive.

Description: The system issued this warning message because it felt that values exceeding 50% for Item 548 (Finished Attic Quality Grade Difference) may be excessive. The system did not reject the value that you coded but it does want to call your attention to it. Values exceeding 50% are unusual and therefore, may be incorrect. You should check your records and ensure that your coding is correct. If the value is correct no action is necessary. If the value is incorrect then you should item update Item 548 (Finished Attic Quality Grade Difference) Action Code = 4. Be sure to code a (+) or (-), depending on the value you want coded.

HEATED AREA

Source: Property record card or interior inspection

Required: For all principal buildings with heat

Data type: Numeric

The heated area will normally be the total finished area of the building (first floor, upper floors, finished basement). However, if some areas such as attics or half stories have been finished with no provision for heating except portable electric units, fireplaces or robber ducts, exclude this area from the total heated area. Do not include unheated or inadequately heated finished areas in the total heated areas.

Enter the total square footage of adequately heated area, right-justified. If none enter zero. If there is no heating system, code a zero.

Error Printout Explanation:

Error Message: W 549-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 549 (Heated Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 549 (Heated Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 549 (Heated Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Heated Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 549 (Heated Area) Action Code = 4.

Error Message: W 549-MUST BE ZERO WHEN 524 EQUALS ZERO, ZERO ASSUMED

Cause: Item 549 (Heated Area) was coded when Item 524 (Heating Source) was coded zero.

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct then item update Item 524 (Heat Source) and Item 549 (Heated Area).

Description: The system found that you had coded a value in Item 549 (Heated Area) but you had coded zero or none in Item 524 (Heated Source). If there is no Heating Source there can be no Heated Area. The system assumed zeros for Item 549 (Heated Area) since there was no Heat Source. If the zero assumed value is correct no action is necessary. If the assumed value is not correct then you should item update Item 524 (Heat Source) and Item 549 (Heated Area) Action Code = 4.

Error Message: W 549-HEATED AREA GREATER THAN LIVING AREA PLUS BASEMENT AREA PLUS ATTACHED GARAGE AREA.

Cause: Item 549 (Heated Area) was coded with a value in square feet which exceeded the total living area.

Action: Item update Item 549 (Heated Area) or one of the Living Area items including 521, 541, 542, 544, or 558 Action Code = 4.

Description: The system calculated the Heated Area based upon the formula below and found that the Heated Area that you coded was greater than the Heated Area which it calculated. The system used the following formula for its calculation of Heated Area.

Heated Area = Item 541 (First Floor Area) + Item 542 (Upper Floor Area) + Item 544 (Half Story Area) + Item 521 (Finished Basement Area) + Item 558 (Attached Garage Area) + Item 557 (Basement Garage Area - [Item 543 (Unfinished Floor Area) + Item 545 (Unfinished Half Story Area)].

The system has no real means of calculating the Heated Area since it cannot view the structure but the information that you coded in Item 549 (Heated Area) appears inconsistent with the data that you have coded for other items. Check your records and if any values are in error item update those items Action Code = 4.

Error Message: W 549=ZERO WHEN 524-525 IS GREATER THAN ZERO, CALCULATED AREA ASSUMED

Cause: Heated Area (Item 549) was coded equal to zeros when both Heat Source (Item 524) and Heat System (Item 525) were coded greater than zeros.

Action: Item update Item 549 (Heated Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 549 (Heated Area) was coded with zeros when Item 524 (Heat Source) and Item 525 (Heating System) were coded greater than zero. Since there was both a heat source and heating system listed the system calculated a Heated Area based upon the following formula.

Heated Area = Item 541 (First Floor Area) + Item 542 (Upper Floor Area) + Item 544 (Half Story Area) + Item 521 (Finished Basement Area) - [Item 543 (Unfinished Floor Area) + Item 545 (Unfinished Half Story Area)].

If the assumed calculated area is incorrect then review all of the above listed items and item update these found to be in error Action Code = 4. If the assumed Heated Area is correct no action is necessary.

FIREPLACE CHIMNEYS

Source: Property record card, exterior inspection, questionnaire

Required: For all principal buildings

Data type: Numeric

Enter the number of fireplace chimneys, regardless of the number of stacks and openings they contain. If none, enter "0".

Computation of Fireplace Chimney Costs

To correctly value the fireplace chimneys on a structure three items must be known; number of chimneys, total heights of chimneys, and the total number of fireplace openings. These three variables are listed in Items 550 "Fireplace Chimneys", Item 551 "Total Chimney Heights" and Item 552 "Fireplace Openings".

1. The first step in calculating the value of a fireplace is to determine the relationship between fireplace openings and total chimneys (552-550). This relationship indicates the number of additional openings in the chimneys.

2. The second step in valuing chimneys is to determine the amount of chimney height in excess of one story. This amount is determined by subtracting Fireplace Chimneys (Item 550 from Total Chimney Heights (Item 551) (551-550).

3. The third step in the chimney valuation process is to determine the value of the individual chimney parts from the Pricing Ladders. Listed below are the chimney costs for the various Quality Grades of Residences.

Grade of Residence	One Story One Opening Rate 1	Each Additional Upper Story Rate 2	Each Additional Opening Rate 3	Pre-Fab Stoves/Fireplaces Rate 4
1	$ 570	$107	$228	$ 448
2	$ 737	$161	$295	$ 536
3	$ 903	$214	$361	$ 624
4	$1069	$267	$428	$ 712
5	$1236	$298	$494	$ 800
6	$1450	$356	$580	$ 888
7	$1664	$416	$666	$ 976
8	$1972	$493	$789	$1064

4. The fourth step in valuing the Fireplace is to determine the cost of each portion of the chimney; First Story, additional stories and additional openings. The following formulas are used to compute these costs.

   (550 Fireplace Chimneys x Rate 1) + [(551 Total Chimney Heights - 550 Fireplace Chimneys x Rate 2)] + [(552 Total Fireplace Openings -550 Fireplace Chimneys) x Rate 3] = Fireplace Cost

5. The rates for Pre-Fabricated Fireplaces and stoves are listed under Rate 4 above. (553 PRE-FAB Fireplaces/Stoves x Rate 4)

Error Printout Explanation:

Error Message: W 550-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 550 (Fireplace Chimneys) was coded or punched with a blank or non-numeric value.

Action: Item update Item 550 (Fireplace Chimneys) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 550 (Fireplace Chimneys) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Fireplace Chimneys. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 550 (Fireplace Chimneys) Action Code = 4.

Error Message: E 550-MUST BE GREATER THAN ZERO IF 551 OR 552 IS, 1 ASSUMED

Cause: Item 550 (Fireplace Chimneys) was coded zero when either Item 551 (Total Chimney Heights) or Item 552 (Fireplace Openings) was coded greater than zero.

Action: Item update Item 550 (Fireplace Chimneys) if the assumed value of 1 is not correct. Also check Items 550, 551 and 552 and item update those that are not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 550 (Fireplace Chimneys) was equal to zero when either Item 551 (Total Chimney Heights) or Item 552 (Fireplace Openings) was coded greater than zero. The system decided that Fireplace Chimneys would have to be coded at least 1 if Item 551 or Item 552 was coded greater than zero. Item update Action Code = 4, any items in error.

TOTAL CHIMNEY HEIGHT

Source: Property record card, exterior inspection, questionnaire

Required: For all principal buildings with chimneys

Data type: Numeric

For each chimney, count the number of stories (1.0, 1.5, 2.0, etc.) of the portion of the building to which it is attached. Add the story heights of all chimneys together. The sum will be in full-stories and a possible half story. Enter the number of full stories in the left-hand column before the decimal point. Enter a "0" if there is no additional half story, or a "5" if there is a half story, in the right-hand column after the decimal point.

If the building has no chimneys, enter zero.

Error Printout Explanation:

Error Message: W 551-BLANK OR NON-NUMERIC, STORIES X CHIMNEYS ASSUMED

Cause: Item 551 (Total Chimney Heights) was coded blank or not numeric and Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: Item update Item 551 (Total Chimney Heights) if the calculated value is not correct. If the calculated value is correct no action is necessary.

Description: Item 551 (Total Chimney Heights) was left blank or was coded with a non-numeric value, when Item 550 (Fireplace Chimneys) was coded. The system assumed that if Fireplace Chimneys existed then they must have a height. In order to provide an assumed value the system used the following formula to calculate chimney height.

Chimney Height = (512) Stories x (550) Fireplace Chimneys.

If the assumed calculated value is correct no action is necessary. If the assumed value is not correct then check your coding for Items 512 (Stories) and Item 550 (Fireplace Chimneys) and Item 551 (Total Chimney Heights) and item update any items that are in error Action Code = 4.

Error Message: W 551-CANNOT BE LESS THAN 1.0., ITEM 512 ASSUMED

Cause: Item 551 (Total Chimney Heights) was coded .5 and Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: No action is necessary if the assumed value of Item 512 (Stories) is correct. If the assumed value is not correct then check your coding for Item 512 (Stories), Item 550 (Fireplace Chimneys) and Item 551 (Total Chimney Heights).

Description: The system found that you had coded Total Chimney Heights (Item 551) less than 1 and you coded Item 550 (Fireplace Chimneys) greater than 0 (1-9). The system assumes that total chimney height must be at least as high as the structure and assumes the value of Item 512 (Stories) for Total Chimney Height. If the assumed value from stories is not correct you should check your coding for Item 512 (Stories), Item 550 (Fireplace Chimneys) and Item 551 (Total Chimney Heights). Item update Action Code = 4 any errors you find. If the assumed value from Stories (Item 512) is correct no action is necessary.

Error Message: W 551-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 551 (Total Chimney Heights) was coded or punched with a blank or non-numeric value, when Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: Item update Item 551 (Total Chimney Heights) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 551 (Total Chimney Heights) was either left blank or was coded with a non-numeric value. The system assumed a value of one story for Chimney Height. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your coding for Item 550 (Fireplace Chimneys) and Item 551 (Total Chimney Heights) and item update any errors Action Code = 4.

Error Message: W 551-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 551 (Total Chimney Heights) was coded or punched with a blank or non-numeric value, when Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: Item update Item 551 (Total Chimney Heights) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 551 (Total Chimney Heights) was either left blank or was coded with a non-numeric value. The system assumed a value of zero. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 551 (Total Chimney Heights) Action Code = 4.

Error Message: W 551-DECIMAL POSITION MUST EQUAL .0 OR .5, ITEM 512 ASSUMED

Cause: The decimal position in Item 551 (Total Chimney Heights) was not equal to .5 or zero.

Action: No action is necessary if the assumed decimal value from Item 512 is correct. If the assumed value is not correct then item update Item 551 (Total Chimney Heights) Action Code = 4.

Description: The system found that the decimal position in Item 551 (Total Chimney Heights) was coded something other than .5 or 0. Since chimney height measurements must be in either story or half Story measurements the system assumed the value from the decimal position of Item 512 (Stories). There should be a correlation between Item 512 (Stories) and Item 551 (Total Chimney Heights) and that's the reason for assuming the value from Item 512. If the assumed value is correct then no action is necessary. If the assumed value is not correct then check your coding for Item 512 (Stories) and Item 551 (Total Chimney Heights) and item update Action Code = 4, if any errors are found.

Error Message: W 551-CANNOT BE LESS THAN ITEM 550, 550 ASSUMED

Cause: Item 551 (Total Chimney Heights) was coded less than Item 550 (Fireplace Chimneys).

Action: Item update either Item 550 (Fireplace Chimneys) or Item 551 (Total Chimney Heights) Action Code = 4.

Description: The system found that Item 551 (Total Chimney Heights) was coded less than Item 550 (Fireplace Chimneys). One story must be allowed for each Fireplace Chimney so it doesn't make sense for Chimney Heights to be less than Fireplace Chimneys. Check your coding for both Item 550 and Item 551. The system assumed the same number of Chimney Heights (Stories) as the number of Stories. If the assumed value is correct no action is necessary. If the assumed value is not correct item update errors found in Item 550 or Item 551 Action Code = 4.

FIREPLACE OPENINGS

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings with chimneys

Data type: Numeric

Count each opening (fireplace) in each chimney. In a single chimney there might be an opening in the basement and on the second floor in addition to one on the first floor. There might be a back-to-back fireplace on one floor with two separate fireboxes or outlets each serving a different room. There might also be a barbecue firebox built into the chimney.

Enter the total number of openings. Enter "0" if none (only freestanding fireplaces). If the building has no chimneys, enter 0.

Error Printout Explanation:

Error Message: W 552-BLANK OR NON-NUMERIC, 1 OPENING, 1 CHIMNEY ASSUMED

Cause: Item 552 (Fireplace Openings) was left blank or was coded non-numeric when Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct check your coding for Item 550 (Fireplace Chimneys) and Item 552 (Fireplace Openings) and item update any errors Action Code = 4.

Description: The system assumes that for each chimney located in a structure at least one opening exists. In this case Item 550 (Fireplace Chimneys) was coded but Item 552 (Fireplace Openings) was either left blank or was coded with a non-numeric variable. The system assumed a value of 1 opening for each chimney and moved whatever value was coded in Item 550 to Item 552. If the assumption is incorrect and there are more openings that should be coded item update Item 552 Action Code = 4. If the assumption is valid no action is necessary.

Error Message: W 552-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 552 (Fireplace Openings) was coded or punched with a blank or non-numeric value, when Item 550 (Fireplace Chimneys) was coded greater than zero.

Action: Item update Item 552 (Fireplace Openings) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 552 (Fireplace Openings) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Item 552. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 552 (Fireplace Openings) Action Code = 4.

Error Message: W 552-CANNOT BE LESS THAN ITEM 550, 550 ASSUMED

Cause: Item 552 (Fireplace Openings) was coded less than Item 550 (Fireplace Chimneys).

Action: Item update Item 552 (Fireplace Chimneys) if the assumed value for Item 550 is not correct. If the assumed value is correct no action is necessary.

Description: The system assumes that there must be at least one opening for every chimney. In this case fewer openings were coded than chimneys. The system determined that it would assume one opening per chimney and moved the value coded in Item 550 to Item 552. If the assumed value from Item 550 (Fireplace Openings) is correct no action is necessary. If the assumed value is not correct then you should check your coding for Items 550 and 552 and item update any errors Action Code = 4.

PREFAB FIREPLACES/STOVES

Source: Property record card, interior inspection, questionnaire

Required: For all principal buildings with chimneys

Data type: Numeric

A prefabricated fireplace is substantially an open firebox unit of metal construction that is connected by pipes to a chimney. Enter the total number of such fireplaces. Enter "0" if none.

Error Printout Explanation:

Error Message: W 553-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 553 (Prefab Fireplaces/Stoves) was coded or punched with a blank or non-numeric value.

Action: Item update Item 553 (Prefab Fireplaces/Stoves) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 553 (Prefab Fireplaces/Stoves) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Item 553. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 553 (Prefab Fireplaces/Stoves) Action Code = 4.

ENCLOSED PORCH AREA

Source: Property record card, exterior inspection

Required: For all principal buildings with enclosed porches

Data type: Numeric

Enter the total square footage of all enclosed porch areas, right-justified. If the building has no enclosed porches, enter zero.

Error Printout Explanation:

Error Message: W 554-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 554 (Enclosed Porch Area) coded or punched with a blank or non-numeric value.

Action: Item update Item 554 (Enclosed Porch Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 554 (Enclosed Porch Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Enclosed Porch Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 554 (Enclosed Porch Area) Action Code = 4.

OPEN PORCH AREA

Source: Property record card, exterior inspection

Required: For all principal buildings with open porches

Data type: Numeric

Enter the total square footage of all open porch areas, right-justified. If the building has no open porches, enter zero.

Error Printout Explanation:

Error Message: W 555-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 555 (Open Porch Area) coded or punched with a blank or non-numeric value.

Action: Item update Item 555 (Open Porch Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 555 (Open Porch Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Open Porch Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 555 (Open Porch Area) Action Code = 4.

DECK/PATIO AREA

Source: Property record card, exterior inspection

Required: For all principal buildings with decks or patios

Data type: Numeric

Enter the total square footage of all deck and patio areas, right-justified. If the building has no decks or patios, enter zero.

Error Printout Explanation:

Error Message: W 556-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 556 (Deck/Patio Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 556 (Deck/Patio Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 556 (Deck/Patio Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Item 556 (Deck Patio Area). If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 556 (Deck/Patio Area) Action Code = 4.

BASEMENT GARAGE AREA

Source: Property record card, interior inspection

Required: For all principal buildings with basement garages

Data type: Numeric

Enter the total square footage of all basement garage areas, right-justified. If the building has no basement garages, enter 0.

Error Printout Explanation:

Error Message: W 557-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 557 (Basement Garage Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 557 (Basement Garage Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 557 (Basement Garage Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Item 557 (Basement Garage Area). If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 557 (Basement Garage Area) Action Code = 4.

ATTACHED GARAGE AREA

Source: Property record card, exterior inspection

Required: For all principal buildings with attached garages

Data type: Numeric

Enter the total square footage of all attached garage areas, right-justified. If the building has no attached garages, enter 0.

Error Printout Explanation:

Error Message: W 558-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 558 (Attached Garage Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 558 (Attached Garage Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 558 (Attached Garage Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Item 558 (Attached Garage Area). If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 558 (Attached Garage Area) Action Code = 4.

ATTACHED CARPORT AREA

Source: Property record card, exterior inspection

Required: For all principal buildings with attached carports

Data type: Numeric

Enter the total square footage of all attached carport areas, right-justified. If the building has no attached carports, enter zero.

Error Printout Explanation:

Error Message: W 559-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 559 (Attached Carport Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 559 (Attached Carport Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 559 (Attached Carport Area) was either left blank or was coded with a non-numeric value. The system assumed a value of Zero for Item 559 (Attached Carport Area). If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 559 (Attached Carport Area) Action Code = 4.

FLAT ADD COSTS

Source: Property record card

Required: For all principal buildings

Data type: Numeric

Costs that are included in this field for structures coded SFR or MOB will be depreciated based upon the information that you have provided. The trending and local index programs will affect this value for all structure codes. A "+" or "-" must be coded in the left-hand column for greater or less than zero. All values for structure codes other than SFR or MOB must be depreciated before the values are entered in Item 560.

A. For all structures coded SFR or MOB.

Enter the total cost of all extra features in the principal building that would not be automatically covered by the standard cost and grade schedules for features enumerated in Item 501 through 559. Costs considered must be the excess over and above the usual costs for the grade and subtractions from the usual costs for the grade. Such costs include, but are not limited to, the following features:

Add = Central vacuum system
Excess foundation costs
Electric garage openers

Subtract = Energy generating property tax incentive (solar panels, greenhouse, envelope house design contribution); deviations from base specifications.

Enter the total costs in dollars, right-justified. If none, enter zero. Make sure to enter the + or - symbol for any flat add costs.

B. For all other structure codes

Enter the depreciated appraised value of the entire structure in whole dollars, right-justified.

Error Printout Explanation:

Error Message: W 560-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 560 (Flat Add Cost) was coded or punched with a blank or non-numeric value.

Action: Item update Item 560 (Flat Add Cost) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 560 (Flat Add Cost) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Item 560 (Flat Add Cost). If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 560 (Flat Add Cost) Action Code = 4.

Error Message: E 560-CANNOT = ZEROS

Cause: Item 560 (Flat Add Cost) is equal to zeros when the Structure Code (Item 501) is not equal to SFR or MOB.

Action: Item update Item 560 (Flat Add Cost) Action Code = 4 with the proper dollar value.

Description: The system found that Item 560 (Flat Add Cost) was coded equal to zeros when the Structure Code was a Commercial Structure Code. The system requires that any property with a Structure Code other than SFR or MOB must have a Flat Add Cost coded. In order to place a value on the master file for a Commercial Structure the flat value must be provided. If your Structure Code is not in error then you must provide a Flat Add Cost. If your Structure Code is in error then you should item update Structure Code (Item 501) Action Code = 4.

ACCESSORY DATA ITEMS

PART IX

601.1

ACCESSORY DATA ITEMS

PART IX

601.1

BUILDING TYPE

Source: Property record card or exterior inspection

Required: For all accessory buildings

Data type: Coded

Enter "1" for detached garage. Enter a "2" for a detached carport. Enter a "3" for an outbuilding. Enter a "4" for storage shed. If there is no building code a zero. Do not include special purpose, very expensive outbuildings; those must be included in Item 619, other accessory flat add values.

If no accessory buildings are on the parcel, code this Item and the following Items 602 through 609 zero; or leave all Items 601-609 blank.

Error Printout Explanation:

Error Message: W 601-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 601 (Building Type) was left blank or was coded with a non-numeric variable when any of Items 602, 603, 604, 605, 606, 607, 608 or 609 were coded.

Action: Item update Item 601 (Building Type) if the assumed value of Detached Garage is not correct.

Description: The system found that Item 601 (Building Type) was left blank or was coded with a non-numeric variable when any of the following items were coded; Items 602 (Stories), Item 603 (Wall Construction), Item 604 (Ground Area), Item 605 (Finished Area), Item 606 (Flat Add Costs), Item 607 (Quality Grade), Item 608 (Effective Age), or Item 609 (Flat Value). The system decided that since items in the 602-609 range were coded it would assume a value for Building Type. The value Detached Garage (1) was assumed since it was considered to be the most likely property type. If the assumed value of the Detached Garage is correct no further action is necessary. If the assumed value is not correct check your coding for Items 601-609 and item update any incorrect information Action Code = 4.

Error Message: W 601-609-NOT NUMERIC, ZEROS ASSUMED

Cause: Items 601-609 (Accessory Building Data) were left blank or were coded non-numeric.

Action: No action is necessary if the zero assumed values were correct. If the zero assumed values are incorrect item update the incorrect items Action Code = 4.

Description: The system found that none of the Items 601-609 were coded with a numeric value. Since no blank values can be written to the master file the system assumed a value of zeros for all items in the range 601-609. If the assumed value of zeros is correct no action is necessary. If the assumed values are incorrect item update any items that are in error. Basically this message is issued to warn you that you didn't code a response for Items 601-609.

Error Message: W 601-OUT OF RANGE, DETACHED GARAGE (1) ASSUMED

Cause: The value coded for Item 601 (Building Type) is not within the valid range of responses.

Action: Item update Item 601 (Building Type) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 601 (Building Type) was not one of the possible valid responses. The valid responses for Item 601 range from 1 to 4. The system assumed a value of Detached Garage (1) because that is a typical response. If Detached Garage is not an accurate response then item update the parcel Action Code = 4. If Detached Garage is an accurate response then no action is necessary.

STORIES

Source: Property record card, exterior inspection

Required: For all accessory buildings

Data type: Numeric

Enter the number of stories in the accessory building in the manner described in Item 512. Carports must be entered as one story.

Error Printout Explanation:

Error Message: E 602-MUST BE ZERO IF 601 EQUALS ZEROS, ZERO ASSUMED

Cause: Item 602 (Stories) was coded greater than zero when Item 601 was coded zero.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct item update all items in error Action Code = 4.

Description: The system found that Item 602 (Stories) was coded greater than zero suggesting that one or more stories existed. However, Item 601 (Building Type) was also coded zero suggesting that no building existed. The system assumed that Item 601 (Building Type) was correctly coded or assumed and changed Item 602 to zeros. If the assumed value of zero is correct no further action is necessary. If the assumed value is not correct then check your records and coding and item update any item in the range 601-609 Action Code = 4.

Error Message: W 602-BLANK OR NON-NUMERIC, 1.0 ASSUMED

Cause: Item 602 (Stories) was coded or punched with a blank or non-numeric value when Item 601 (Building Type) was coded 1-4.

Action: Item update Item 602 (Stories) Action Code = 4 if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 602 (Stories) was either left blank or was coded with a non-numeric value when Item 601 (Building Type) was coded 1-4. The system assumed that the structure must have a valid code for stories and assumed a value of one for Stories. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 602 (Stories) Action Code = 4.

Error Message: W 602-CANNOT EQUAL ZEROS, 1.0 ASSUMED

Cause: Item 602 was coded zero when Item 601 (Building Type) was coded 1-4.

Action: Item update Item 602 if the assumed value of 1.0 is not correct. If the assumed value is not correct item update Action Code = 4.

Description: The system found that Item 602 (Stories) was coded zero when Item 601 (Building Type) was coded greater than zero. The system assumed that the structure must have a value coded for Stories and assumed a value of 1 Story. If the assumed value is not correct item update Item 602 or check your coding for Items 601-609 and item update any items in error. If the assumed value is correct no action is necessary.

Error Message: W 602-CANNOT BE LESS THAN 1.0, 1.0 ASSUMED

Cause: Item 602 is coded less than 1.0 Stories when Building Type (Item 601) is coded 1-4.

Action: Item update Item 602 (Stories) if the assumed value of 1.0 is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 602 (Stories) was coded less than 1.0 Story when Building Type (Item 601) was coded greater than 1. The system decided that if a building were present then it must have data coded in Item 602 (Stories). The system assumed a value of 1.0 Stories. If the assumed value is correct no action is necessary. If the assumed value of 1.0 Stories is not correct then you should check your coding for Items 601-609 and item update any items that are incorrect.

Error Message: W 602-CANNOT BE GREATER THAN 1 FOR DETACHED CARPORT OR SHED, 1.0 ASSUMED

Cause: Item 602 (Stories) was coded greater than 1.0 when Item 601 was coded equal to 2 (Detached Carport) or 4 (Shed).

Action: Item update Item 601 (Building Type) or Item 602 (Stories) if the assumed value of 1.0 is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 602 (Stories) was coded greater than 1.0 when Item 601 (Building Type) was coded equal to 2 (Detached Carport) or 4 (Shed). Sheds and Carports cannot exceed 1.0 stories in height by definition. The system assumed that the correct value for Item 602 (Stories) should be 1.0. If the assumed value of 1.0 for stories is incorrect then check your coding for Item 601 (Building type) and Item 602 (Stories). If the assumed value is correct no further action is necessary.

Error Message: W 602-DECIMAL POSITION MUST EQUAL .0 OR .5, .5 ASSUMED

Cause: The decimal position of Item 602 (Stories) was coded something other than .0 or .5.

Action: Item update Item 602 (Stories) if the assumed value of .5 is not correct. If the assumed value is correct no further action is necessary.

Description: The system found that the value coded in the decimal position of Item 602 (Stories) was not equal to .5 or .0. The only valid responses for the decimal position of Item 602 are .5 or .0. The system assumed a value of .5 for Stories. If the assumed value is not correct then item update Item 602 (Stories) Action Code = 4. If the assumed value is correct no further action is necessary.

WALL CONSTRUCTION

Source: Property record card or exterior inspection

Required: For all accessory buildings except carports

Data type: Coded

Enter the predominate type of wall construction of the accessory building in the manner described in Item 514. For a carport, code the column zero.

Error Printout Explanation:

Error Message: W 603-MUST BE ZERO IF 601 EQUALS ZERO, 0 ASSUMED

Cause: Item 603 (Wall Construction) was coded greater than zero when Item 601 (Building Type) was coded zero.

Action: No action is necessary if the zero assumed value is correct. If the assumed value is not correct then check your coding for Items 601-609 and item update any incorrect Items Action Code = 4.

Description: The system found that Wall Construction (Item 603) was coded when there was no building listed (Item 601). The system decided that if no building was present no wall construction could be coded. The system assumed a value of zero for Wall Construction. No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then check your coding for Items 601-609 and item update any items that are incorrect Action Code = 4.

Error Message: W 603-MUST BE 1 WHEN 601 EQUAL 2, 1 ASSUMED

Cause: Item 603 (Wall Construction) was not coded frame when Item 601 (Building Type) was coded 2 (Detached Carport).

Action: No action is necessary if the assumed value of Frame (1) is correct. If the assumed value is not correct check your coding for Items 601-609 and correct any errors Action Code = 4.

Description: The system found that a Wall Construction type other than Frame (1) was coded for a (2) Detached Carport (Item 601). Frame is the only valid Wall Construction type for a Detached Carport. The system assumed a value of 1 (Frame) for Wall Construction. If the assumed value is correct no further action is necessary. If the assumed value of frame is incorrect check your coding for Items 601-609. Correct any incorrect items Action Code = 4.

Error Message: W 603-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 603 (Wall Construction) was coded or punched with a blank or non-numeric value, when Building Type was equal to 1, 3 or 4.

Action: Item update Item 603 (Wall Construction) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 603 (Wall Construction) was either left blank or was coded with a non-numeric value. The system assumed a value of Frame (1) for Wall Construction. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 601 (Wall Construction) Action Code = 4.

Error Message: W 603-OUT OF RANGE, 1 ASSUMED

Cause: Item 603 (Wall Construction) was coded greater than 4.

Action: Item update Action Code = 4 if the assumed value of Frame (1) is not accurate.

Description: The system encountered a number greater than 4 for Item 603 (Wall Construction). The valid range for Wall Construction is 0-4. Since a value outside of this range was coded, an assumed value of Frame (1) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

Error Message: W 603-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 603 (Wall Construction) was coded or punched with a blank or non-numeric value, when Building Type was coded (2) Detached Carport.

Action: Item update Item 603 (Wall Construction) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 603 (Wall Construction) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Wall Construction. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 601 (Wall Construction) Action Code = 4.

GROUND AREA

Source: Property record card or exterior inspection

Required: For all accessory buildings

Data type: Numeric

Enter the total square footage of the first floor of the accessory building, right-justified. It is assumed that the perimeter of an accessory building is the same on all floors.

Error Printout Explanation:

Error Message: E 604-NOT NUMERIC WHEN 601 EQUAL ZERO, ZERO ASSUMED

Cause: Item 604 (Ground Area) was left blank or was punched/coded with a non-numeric value when Item 601 (Building Type) was coded none (0).

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct check your coding for Items 601-609 and item update any errors Action Code = 4.

Description: The system found that a Ground Area was not coded or was coded incorrectly. The system checked Item 601 (Building Type) and found that no building (0) was listed. The system assumed that no Ground Area would exist if no building was present. Zero was assumed. If the zero assumed value was correct no action is necessary. If the zero assumed value is incorrect check your coding for Items 601-609, and item update any errors Action Code = 4.

Error Message: W 604-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 604 (Ground Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 604 (Ground Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 604 (Ground Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Ground Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 604 (Ground Area) Action Code = 4.

Error Message: E 604-CANNOT EQUAL ZEROS

Cause: Item 604 (Ground Area) was coded zero when Item 601 (Building Type) was coded 1-4.

Action: Item update Item 604 (Ground Area) Action Code = 4.

Description: The system found that no Ground Area (Item 604) was coded when Building Type (Item 601) was coded. If a building exists it should have a Ground Area. No cost computation can be generated until a Ground Area is provided. Provide the Ground Area by item updating Item 604 (Ground Area) Action Code = 4.

FINISHED AREA

Source: Property record card or interior inspection

Required: For all accessory buildings except carports

Data type: Numeric

Enter the total square footage of finished area in the accessory building, right-justified. Enter a zero if there is no finished area or the structure is a carport.

Error Printout Explanation:

Error Message: W 605-MUST BE ZERO WHEN 601 EQUALS 2, ZEROS ASSUMED

Cause: Item 605 (Finished Area) was coded greater than zeros when Item 601 (Building Type) was coded 2 (Detached Carport).

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct check your coding for Items 601-609 and item update any errors Action Code = 4.

Description: The system found that you listed a Finished Area for a Detached Carport. The system assumed a value of zero since the Cost Computation for Carports does not include segregated costs for Finished Carports. If you need to add value to the Carport code the additional value in Item 606 (Flat Add Costs). If the zero assumed value is not correct check your coding for Items 601-609 to ensure that all responses are correct. Item update any errors Action Code = 4.

Error Message: W 605-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 605 (Finished Area) was coded or punched with a blank or non-numeric value, when Building Type was coded 1, 3, or 4.

Action: Item update Item 605 (Finished Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 605 (Finished Area) was either left blank or was coded with a non-numeric value, when Item 601 (Building Type) was coded 1, 3, or 4. The system assumed a value of zero for Finished Area. In order to provide an accurate cost computation for your Accessory Building you should provide the amount of Finished Area. If the assumed value of zeros is accurate no action is necessary.

Error Message: W 605-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 605 (Finished Area) was coded or punched with a blank or non-numeric value, when Building Type was coded 2 (Detached Carport).

Action: Item update Item 605 (Finished Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 605 (Finished Area) was either left blank or was coded with a non-numeric value when Item 601 (Building type) was coded 2 (Detached Carport). The system assumed a value of zero for Finished Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your coding for Items 601-609 and item update any errors Action Code = 4.

Error Message: W 605-AREA GREATER THAN GROUND AREA X ALL STORIES, COMPUTED AREA ASSUMED

Cause: Item 605 (Finished Area) is greater than the Ground Area (Item 604) times the Stories (Item 602).

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct then check your coding for Items 602 and Item 604 and item update any errors Action Code = 4.

Description: The system found that the Finished Area (Item 605) that you coded was greater than the total area of the structure. The system calculated the total area by multiplying Ground Area (Item 604) by the number of Stories (Item 602). 604 x 602 = Total Area. Since it is impossible to have a finished area greater than the total area, the system assumed that the total area value should be assumed for the Finished Area. If the assumed value is correct no action is necessary. If the assumed value is not correct you should check your coding for Finished Area (Item 605), Ground Area (Item 604) and Stories (Item 602) and item update any errors Action Code = 4.

FLAT ADD COSTS

Source: Property record card

Required: For all accessory buildings

Data type: Numeric

Enter the total costs of all extra features in the accessory building in the manner described in Item 560. The Flat Add Costs will be depreciated based upon Item 608. If Item 608 is not coded the system will assume the depreciation from Item 508 or 509.

Error Printout Explanation:

Error Message: E 606-NOT NUMERIC WHEN 601 EQUALS ZERO, ZERO ASSUMED

Cause: Item 606 (Flat Add Costs) was left blank or was coded/punched with a non-numeric value, when Building Type (item 601) was coded zero.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct check your coding for Items 601-609 and item update any errors Action Code = 4.

Description: The system found that Item 606 (Flat Add Costs) was coded or punched with a non-numeric value or was left blank. The system looked at Item 601 (Building Type) and found that Building Type was coded zero. Since there was no building coded there should be no Flat Add Costs coded. Zeros were assumed for Flat Add Costs (Item 606). The zero assumed value should be correct and no action should be necessary. If the assumed value of zeros is not correct then check your coding for Items 601-609 and correct any errors Action Code = 4.

Error Message: W 606-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 606 (Flat Add Costs) was coded or punched with a blank or non-numeric value, when Building Type (Item 601) was coded greater than zero.

Action: Item update Item 606 (Flat Add Costs) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 606 (Flat Add Costs) was either left blank or was coded with a non-numeric value when Building Type (Item 601) was coded zero. The system assumed a value of zero for Flat Add Costs. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 606 (Flat Add Costs) Action Code = 4.

QUALITY GRADE

Source: Property record card

Required: For all accessory buildings

Data type: Coded

Enter the quality grade of the accessory building in the manner described in Item 505. Unless otherwise indicated, enter the same grade as assigned to the principal building which the accessory building best serves.

Error Printout Explanation:

Error Message: E 607-NOT NUMERIC WHEN 601 EQUALS ZERO, ZEROS ASSUMED

Cause: Item 607 (Quality Grade) was left blank or was coded/punched with a non-numeric value when Item 601 (Building Type) was coded zero.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct check your coding for Items 601-609 and correct any errors Action Code = 4.

Description: The system found that Item 607 (Quality Grade) was left blank or was punched/coded with a non-numeric variable, when Item 601 (Building Type) was coded zero. The system determined that if no building existed then it should assume a quality grade of zero. Zero was assumed. If the zero assumed value is correct no action is necessary. If the zero assumed value is not correct then check your coding for Items 601-609 and correct any errors Action Code = 4.

Error Message: W 607-MUST BE CODED WHEN 601 IS GREATER THAN ZERO, ITEM 505 ASSUMED

Cause: Item 607 (Quality Grade) was left blank or was coded/punched non-numeric when Item 601 (Building Type) was coded greater than zero.

Action: None if the Quality Grade assumed from Item 505 (Principal Building Quality Grade) is accurate. If the assumed Quality Grade is not accurate then item update Action Code = 4.

Description: The system found that Item 607 (Quality Grade) was not coded or was coded with a non-numeric value. The system checked Item 601 (Building Type) and found that it was coded with a value greater than zero. The system decided that a Quality Grade must be coded since a Structure was present and moved the quality grade value located in Item 505 (Quality Grade) of the Principal Building into Item 607. As the system makes the assumption of Quality Grade it checks to see if any of the values it is assuming are from Mobile Home Quality Grades. If no Quality Grade is coded in Item 505 a Quality Grade 5 is assumed for Item 607. If the system detects a value of "L", "A", "G" or "E" it automatically moves "2", "3", "4" or "5" into Item 607 (Quality Grade). If no Quality Grade is coded in Item 505 a Quality Grade 5 is assumed for Item 607. If the assumed Quality Grade is correct no further action is necessary. If the assumed value is not correct check your coding for Items 505, 601-609 and item update any errors Action Code = 4.

Error Message: W 607-OUT OF RANGE, ITEM 505 ASSUMED

Cause: Item 607 (Quality Grade) was coded less than 1 or greater than 8.

Action: No action is necessary if the assumed Quality Grade from Item 505 is correct. If the assumed Quality Grade is not correct then item update Item 607 Action Code = 4.

Description: The system found that the Quality Grade coded in Item 607 was less than 1 or greater than 8. Since the value was out of range the system decided to assume a value from Item 505 (Quality Grade) of the Principal Structure. The system checks to see if any of the assumed values are Mobile Homes Quality Grades and translates them to Standard Quality Grades as follows. "L" = 2, "A" = 3, "G" = 4 and "E" = 5. If no Quality Grade is coded in Item 505 a Quality Grade 5 is assumed for Item 607. If the assumed value for Quality Grade is accurate no further action is necessary. If the assumed value is not correct then check your coding for Items 505 and 601-609. Correct any errors with an item update Action Code = 4.

EFFECTIVE AGE

Source: Property record card

Required: For all accessory buildings where no entry is made for flat value (Item 609)

Data type: Numeric

The appraiser must take care in using Effective Age and Flat Value. Only one of these items can be used in generating a cost computation. If only Effective Age is listed it will be the factor used for depreciation of the structure. If Effective Age is not coded and Flat Value is coded, the Flat Value will be used as the value of the structure. If both Effective Age and Flat Value are coded the system will generate costed values using each method but the Flat Value will be the value used to generate a parcel total.

Error Printout Explanation:

Error Message: E 608-NOT NUMERIC WHEN 601 EQUALS ZERO, ZERO ASSUMED

Cause: Item 608 (Effective Age) was left blank or was punched/coded non-numeric when Item 601 (Building Type) was coded zero.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then check your coding for Items 601-609 and item update any errors Action Code = 4.

Description: The system found that Effective Age (Item 608) was left blank or was punched or coded with a non-numeric value. The system looked at Item 601 (Building Type) and found that no building existed (Item 601 = 0). Since no building was present no Effective Age should be coded. The system assumed zeros for Item 608 (Effective Age). If the assumed value is correct no action is necessary. If the zero assumed value is incorrect then check your coding for Items 601-609 and correct any errors with an item update form Action Code = 4.

Error Message: W 608-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 608 (Effective Age) was coded or punched with a blank or non-numeric value, when Item 601 Building Type was coded greater than 0.

Action: Item update Item 608 (Effective Age) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 608 (Effective Age) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Effective Age. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 608 (Effective Age) Action Code = 4.

Error Message: W 608-OUT OF RANGE, 70 ASSUMED

Cause: Item 608 (Effective Age) was coded greater than 70, when Item 601 was correctly coded as a Detached Garage, Detached Carport or an Outbuilding.

Action: Item update Action Code = 4 if the assumed value of 70 years is not accurate.

Description: The system encountered a number greater than 70 for Item 608 (Effective Age). The value range for Effective Age is 01 - 70. Since a value outside of this range was coded, an assumed value of 70 was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

Error Message: W 608-OUT OF RANGE, 20 ASSUMED

Cause: Item 608 (Effective Age) was coded greater than 20 years when Item 601 Building Type was Coded 4 (Shed).

Action: Item update Item 608 (Effective Age) Action Code = 4 if the assumed value of 20 is not correct. If the assumed value of 20 is correct no action is necessary.

Description: The system discovered that you coded the Effective Age for a shed greater than 20 years. The maximum allowable Effective Age for shed type outbuildings is 20 years. The system assumed the maximum Effective Age for Item 608 of 20 years. If the assumed value of 20 is correct no action is necessary. If the assumed value is not correct check your Effective Age tables and item update either 608 (Effective Age) or Item 609 (Flat Add Costs) Action Code = 4.

FLAT VALUE

Source: Property record card

Required: For all accessory buildings where no entry is made for effective age (Item 608).

Data type: Numeric

Flat value is the value of the accessory building after consideration of physical depreciation and any obsolescence. If both Flat Value and Effective Age are coded both values will be calculated in cost comp. However, Flat Value will always override Effective Age when a parcel total is generated.

Enter flat value in dollars, right-justified. It must be greater than zero.

Error Printout Explanation:

Error Message: E 609-NOT NUMERIC WHEN 601 EQUALS ZERO, ZERO ASSUMED

Cause: Item 609 (Flat Value) was left blank or was coded/punched with a non-numeric value when Item 601 (Building Type) was coded 0.

Action: No action is necessary if the 0 assumed value is correct. If the zero assumed value is not correct check your coding for Items 601-609 and correct any errors with an Item Update Form Action Code = 4.

Description: The system found that Item 609 (Flat Value) was left blank or was coded/punched with a non-numeric value. The system also checked Item 601 (Building Type) and found that it was coded zero. Since there was no building there should be nothing to Flat Value so the system assumed a zero for Flat Value. If the assumed value is correct no action is necessary. If the assumed value is incorrect then check your coding for Items 601-609 and item update any errors Action Code = 4.

Error Message: E 609-NOT NUMERIC, ZERO ASSUMED

Cause: Item 609 (Flat Value) was left blank or was coded/punched with a non-numeric value, when Item 608 (Effective Age) was coded zeros, and Item 601 was coded greater than zero.

Action: Item update either Item 609 (Flat Value) or Item 608 (Effective Age) Action Code = 4.

Description: The system found that Item 609 (Flat Value) was left blank or was coded or punched with a non-numeric value. The system looked to see if Effective Age was coded because one of the values, Effective Age or Flat Value, must be coded in order to generate an accurate cost computation. Effective Age was coded equal to zeros so the system issued an E Level message for Flat Value. You have three choices 1) Quit and run off in Frustration 2) Item update Flat Value or Effective Age depending on which would most accurately reflect the value of the accessory building; or 3) Item update both Effective Age and Flat Value, wait for your cost computation sheet to determine which value would be most representative and then item update Flat Value accordingly. You must take some action on either Flat Value or Effective Age.

Error Message: E 609-MUST BE GREATER THAN ZERO WHEN 608 IS NOT GREATER THAN ZERO

Cause: Item 609 (Flat Value) must be coded greater than zero when Item 601 (Building Type) is coded greater than zero and Effective Age (Item 608) is coded equal to zeros.

Action: Item update either Flat Value (Item 609) or Effective Age (Item 608) Action Code = 4.

Description: The system noticed that Flat Value was coded zeros when a Building Type (Item 601) was listed and Effective Age was also coded zeros. When a Building Type is listed a corresponding value must also be coded for either Effective Age, Flat Value or both. Without an Effective Age or a Flat Value it is impossible to value the structure. Item update Effective Age, Flat Value or both Items Action Code = 4, in order to generate a cost computation sheet. Remember if you code both Flat Value and Effective Age, Flat Value will override Effective Age for the final total value but both values will be shown for comparison purposes.

Error Message: W 609-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 609 (Flat Value) was coded or punched with a blank or non-numeric value.

Action: Item update Item 609 (Flat Value) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 609 (Flat Value) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Flat Value. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 609 (Flat Value) Action Code = 4.

POOL TYPE

Source: Property record card, exterior inspection, questionnaire

Required: For all pools

Data type: Coded

Enter a "1" for pool with a plastic interlined design (below grade), which may be constructed over wood or concrete block bulkheads and floor. Enter a "2" for a poured reinforced concrete pool. Enter a "3" for a gunite pool, i.e., blown-on concrete over and around a reinforcing steel network. Enter a "4" for a preformed laminated fiberglass pool. Consider only swimming pools, not decorative pools or other artificial ponds.

If no swimming pools are on the parcel, code this item and the following items 611 through 614 zero.

Error Printout Explanation:

Error Message: W 601-NON-NUMERIC, 4 ASSUMED

Cause: Item 610 (Pool Type) was coded or punched with a non-numeric variable on sheet one of a parcel.

Action: Item update Item 610 (Pool Type) Action Code = 4 if the assumed value of Fiberglass is incorrect.

Description: The system found that Item 610 (Pool Type) was coded with a non-numeric value on sheet one of a parcel. Since a value was coded the system assumed that you were attempting to list a Pool Type. The system assumed Fiberglass (4) since that is the most common type of pool. If the assumed value is correct no action is necessary. If the assumed value is incorrect then item update Item 610 (Pool Type) to the correct value Action Code = 4.

Error Message: W 610-614 BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: All Items 610 through 614 were left blank.

Action: No action is necessary, the system coded zeros for you. If you didn't intend to leave Items 610-614 blank you should item update the parcel Action Code = 4.

Description: The system found that all data items from Item 610 to Item 614 were left blank. Since no blank fields can be passed to the master file the system assumed that you left the fields intentionally blank and moved zeros to all fields 610-614. No action is required unless you forgot to code Items 610-614 in which case you will have to item update those items in error.

Error Message: W 610-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 610 (Pool Type) was coded or punched with a blank or non-numeric value, when Items 611-614 were coded.

Action: Item update Item 610 (Pool Type) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then check your coding for Items 611-614.

Description: The system found that Item 610 (Pool Type) was either left blank or was coded with a non-numeric value when Items 611-614 were coded. The system assumed a value of zeros for Pool Type. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your coding for Items 611-614 and item update all errors Action Code = 4.

Error Message: W 610-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 610 (Pool Type) was coded or punched with non-numeric value.

Action: Item update Item 610 (Pool Type) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 610 (Pool Type) was coded with a non-numeric value. The system assumed a value of zeros for Pool Type. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 610 (Pool Type) Action Code = 4.

Error Message: W 610-OUT OF RANGE, 4 ASSUMED

Cause: Item 610 (Pool Type) was coded greater than 4.

Action: Item update Action Code = 4 if the assumed value of Fiberglass (4) is not accurate.

Description: The system encountered a number greater than 4 for Item 610 (Pool Type). The value range for Pool Type is 0-4. Since a value outside of this range was coded, an assumed value of Fiberglass (4) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

POOL AREA

Source: Property record card or exterior inspection

Required: For all pools

Data type: Numeric

Enter the total square footage of the surface of the pool, right-justified.

Error Printout Explanation:

Error Message: W 611-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 611 (Pool Area) was coded or punched with a blank or non-numeric value, when Pool Type (Item 601) was coded zeros.

Action: Item update Item 611 (Pool Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 611 (Pool Area) was either left blank or was coded with a non-numeric value, when Item 610 (Pool Type) was coded equal to zero. The system assumed a value of zeros for Pool Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 611 (Pool Area) Action Code = 4.

Error Message: E 611-NOT NUMERIC WHEN 610 IS GREATER THAN 0, 0 ASSUMED

Cause: Item 611 (Pool Area) was left blank or was coded with a non-numeric value when Item 601 (Pool Type) was coded greater than zero.

Action: Item update Item 610 (Pool Area) Action Code = 4, or review your coding for Items 611-614 and item update any errors Action Code = 4.

Description: The system found that Item 611 (Pool Area) was left blank or was coded or punched with a non-numeric value. The system looked at Item 610 (Pool Type) and found that it had been coded. Since there is a Pool Type there must be a Pool Area provided in order to correctly value the pool. The system has no means to determine the Pool Area so it assumed a zero. Item update Pool Area Action Code = 4 with the proper Pool Area or check your coding for Items 611-614 and item update any errors. This message will be followed by the message E 611-CANNOT EQUAL ZEROS - indicating that you must provide an accurate pool area.

Error Message: W 611-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 611 (Pool Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 611 (Pool Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 611 (Pool Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Pool Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 611 (Pool Area) Action Code = 4.

Error Message: E 611-CANNOT EQUAL ZEROS

Cause: Item 611 (Pool Area) was coded with zeros when Item 610 was coded greater than zeros.

Action: Item update Item 611 (Pool Area) Action Code = 4.

Description: The system found that Item 611 (Pool Area) was coded or assumed as zeros when Pool Type (Item 610) was coded greater than zero. In order to correctly generate a cost computation sheet the Pool Area must be provided. Item update Item 611 (Pool Area) Action Code = 4, or review all of your coding for Items 610-614 and update any errors Action Code = 4.

QUALITY GRADE

Source: Property record card

Required: For all pools

Data type: Coded

Enter the quality grade of the swimming pool in the manner described in Item 505. Unless otherwise indicated, enter the same grade as assigned to the principal building which the pool serves.

Error Printout Explanation:

Error Message: W 612-BLANK OR NOT NUMERIC, 505 GRADE ASSUMED

Cause: Item 612 (Quality Grade) was left blank or was coded/punched with a non-numeric value, when Item 610 (Pool Type) was coded greater than zeros.

Action: No action is necessary if the assumed Quality Grade is correct. If the assumed value is not correct item update Item 612 (Quality Grade) Action Code = 4.

Description: The system found that Item 612 (Quality Grade) had been left blank or had been coded/punched with a non-numeric value. The system looked at Item 610 (Pool Type) and found that it had been coded greater than zero. In order to correctly generate a cost computation for the pool a Quality Grade is needed. The system assumed the Quality Grade listed in Item 505 for the principal building. If the assumed Quality Grade from Item 505 is correct no further action is necessary. If the assumed Quality Grade is not correct item update Item 612 Action Code = 4.

Error Message: E 612-NOT-NUMERIC WHEN 610 IS GREATER THAN 0, 0 ASSUMED

Cause: Item 612 (Quality Grade) was left blank or was coded/punched non-numeric when Item 610 (Pool Type) was greater than zero and Quality Grade (Item 505) was blank.

Action: Item update Item 612 (Quality Grade) Action Code = 4.

Description: The system found that Item 612 (Quality Grade) had been left blank or was coded or punched with a non-numeric value. The system looked at Item 610 (Pool Type) and found that it had been coded so the system checked Item 505 (Quality Grade). Item 505 (Quality Grade) was blank so the system could not assume a value from Item 505. The system had no means of determining the Quality Grade and decided to assume 0. Item update Item 612 (Quality Grade) Action Code = 4, in order to provide a Quality Grade and generate a cost computation for the pool.

Error Message: W 612-BLANK OR NOT NUMERIC, ZEROS ASSUMED

Cause: Item 612 (Quality Grade) was coded or punched with a blank or non-numeric value, when Item 610 (Pool Type) was coded zero.

Action: Item update Item 612 (Quality Grade) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 612 (Quality Grade) was either left blank or was coded with a non-numeric value when Item 610 (Pool Type) was equal to zero. The system assumed a value of zeros for Quality Grade because no pool exists according to Item 610. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your coding for Items 610-614 and item update any errors Action Code = 4.

Error Message: W 612-OUT OF RANGE, 505 GRADE ASSUMED

Cause: Item 612 (Quality Grade) was coded greater than 8.

Action: Item update Action Code = 4 if the assumed value of the Quality Grade from Item 505 is not accurate.

Description: The system encountered a number greater than 8 for Item 612 (Quality Grade). The valid range for Quality Grade is 1-8. Since a value outside of this range was coded an assumed value of the Quality Grade from Item 505 was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4. For quality grade translations see Item 505.

Error Message: W 612-OUT OF RANGE

Cause: Item 612 (Quality Grade) was coded greater than 8, and no value was coded in Item 505 (Quality Grade) that could be assumed.

Action: Item update Action Code = 4 Item 612 (Quality Grade).

Description: The system encountered a number greater than 8 for Item 612 (Quality Grade). The valid range for Quality Grade is 1-8. Since a value outside of this range was coded, the system looked at Item 505 (Quality Grade) of the principal structure. Since no Quality Grade was listed for Item 505 no assumed value could be generated. You should check your records and item update Item 612 (Quality Grade) Action Code = 4, to generate a cost computation sheet for the pool.

EFFECTIVE AGE

Source: Property record card

Required: For all pools where no entry is made for Flat Value (Item 614)

Data type: Numeric

One of the items, Effective Age or Flat Value, must be entered for the swimming pool. Effective age is described in Item 507 and should be entered here in the same manner.

If effective age is not entered, code both columns zero. If it is entered, code Item 614 with a dollar value or zero.

Error Printout Explanation:

Error Message: E 613-NOT NUMERIC WHEN 610 IS GREATER THAN 0, 0 ASSUMED

Cause: Item 613 (Effective Age) was left blank or was coded or punched with a non-numeric value when Item 610 (Pool Type) was coded greater than 0.

Action: Item update Item 613 (Effective Age) Action Code = 4 if the zero assumed value is not correct. If the zero assumed value is correct no action is necessary.

Description: The system found that Item 613 (Effective Age) was left blank or was coded or punched with a non-numeric value when Item 610 (Pool Type) was coded greater than zero. The system assumed a value of zero for Effective Age since it has no means of calculating the Effective Age of the Structure. If the zero assumed value is not correct, item update Item 613 (Effective Age) Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 613-BLANK OR NOT NUMERIC, ZEROS ASSUMED

Cause: Item 613 (Effective Age) was coded or punched with a blank or non-numeric value, when Pool Type (Item 613) was coded equal to zero.

Action: Item update Item 613 (Effective Age) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 613 (Effective Age) was either left blank or was coded with a non-numeric value when Item 610 (Pool Type) was coded equal to zero. The system assumed a value of zeros for Effective Age since no pool was coded. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your coding for Items 610-614 and item update any errors Action Code = 4.

Error Message: W 613-OUT OF RANGE, 20 ASSUMED

Cause: Item 613 (Effective Age) was coded greater than 20

Action: Item update Action Code = 4 if the assumed value of 20 years is not accurate.

Description: The system encountered a number greater than 20 for Item 613 (Effective Age). The valid range for Effective Age is 0-20. Since a value outside of this range was coded an assumed value of 20 was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

FLAT VALUE

Source: Property record card

Required: For all pools where no entry is made for effective age (Item 613).

Data type: Numeric

One and only one of the items, Effective Age or Flat Value, must be entered for the swimming pool. Thus, if an entry is made for Flat Value, code item 613 zero. Flat value is the value of the swimming pool after consideration of physical depreciation.

Enter Flat Value in dollars, right-justified. It must be greater than zero if Item 613 (Effective Age) is coded zero.

Error Printout Explanation:

Error Message: W 614-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 614 (Flat Value) was coded or punched with a blank or non-numric value.

Action: Item update Item 614 (Flat Value) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 614 (Flat Value) was either left blank or was coded with a non-numeric value. The system assumed a value of zero for Flat Value. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 614 (Flat Value) Action Code = 4.

Error Message: E 614-MUST BE GREATER THAN ZERO WHEN 613 IS NOT

Cause: Item 614 (Flat Value) was assumed or coded zeros when Item 613 (Effective Age) was coded equal to zeros and Item 610 (Pool Type) was coded not equal to zero.

Action: Item update either Item 613 (Effective Age) or Item 614 (Flat Value) or both Action Code = 4.

Description: The system found that neither Effective Age (Item 613) or Flat Value (Item 614) were coded when Pool Type (Item 610) was coded. In order to depreciate the Pool and generate an accurate cost computation the system requires that one of the two, Items Effective Age or Flat Value, be coded. You may code both Items if you would like to see the Pool valued using both Effective Age and Flat Value. The Flat Value will override Effective Age and will be used to value the Pool if both Item 613 and Item 614 are used. The value generated through the use of Effective Age will be printed for your review. Item update Action Code = 4 either Item 613 (Effective Age) or Item 614 (Flat Value).

CONCRETE AREA

Source: Property record card or exterior inspection

Required: For all areas paved with concrete

Data type: Numeric

Enter the total square footage of all areas paved with concrete, right-justified.

Error Printout Explanation:

Error Message: W 615-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 615 (Concrete Area) was coded or punched with a blank or non-numeric value.

Action: Item update Item 615 (Concrete Area) Action Code = 4 if the assumed value is not correct. If the assumed value is correct then no action is necessary.

Description: The system found that Item 615 (Concrete Area) was either left blank or was coded with a non-numeric value. The system assumed a value of zeros for Concrete Area. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 615 (Concrete Area) Action Code = 4.

Error Message: E 615-CANNOT BE ZERO WHEN 616 IS GREATER THAN ZERO

Cause: Item 615 (Concrete Area) cannot equal zero when Item 616 (Flat Value) is coded greater than zero.

Action: Item update Item 615 (Concrete Area) or Item 616 (Flat Value) depending on which is in error.

Description: The system found that Item 615 (Concrete Area) was coded equal to zero when Item 616 (Flat Value) was coded greater than zero. This suggests that although no Concrete exists, it has value. You should check your records and determine whether or not any Concrete exists and item update either Item 615 (Concrete Area) or Item 616 (Flat Value) Action Code = 4.

FLAT VALUE

Source: Property record card

Required: For all areas paved with concrete.

Data type: Numeric

Enter the depreciated flat value in dollars, right-justified.

Error Printout Explanation:

Error Message: W 616-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 616 (Flat Value) was left blank or was coded or punched with a non-numeric value.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct item update the parcel Action Code = 4.

Description: The system found that Item 616 (Flat Value) was left blank or was coded or punched with a non-numeric value. The system has no method of calculating the Flat Value so it assumed a value of zeros. If the zero assumed value is accurate no further action is necessary. If the zero assumed value is not accurate item update Item 616 (Flat Value) Action Code = 4.

Error Message: E 616-CANNOT BE COMPLETED WHEN ITEM 615 IS NOT

Cause: Item 616 (Flat Value) was coded when Item 615 (Concrete Area) was not coded.

Action: Item update Item 616 (Flat Value) or Item 615 (Concrete Area) Action Code = 4, depending on which is in error.

Description: The system found that a Flat Value (Item 616) was coded for Concrete Area (Item 615) when no Concrete Area was listed. The system felt that it is inconsistent to value something that doesn't exist so it issued this message. You should check your records to see if any Concrete Area exists and depending on what you find item update either Item 615 (Concrete Area) or Item 616 (Flat Value) Action Code = 4.

ASPHALT AREA

Source: Property record card or exterior inspection

Required: For all areas paved with asphalt

Data type: Numeric

Enter the total square footage of all areas paved with asphalt, right-justified.

Error Printout Explanation:

Error Message: W 617-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 617 (Asphalt Area) was left blank or was coded or punched with a non-numeric value.

Action: No action is necessary if the zero assumed value is accurate. If the zero assumed value is not correct then item update Item 617 Action Code = 4.

Description: The system found that Item 617 (Asphalt Area) was left blank or was coded/punched with a non-numeric value. The system had no method of calculating the Asphalt Area so it assumed a value of zero. If the zero assumed value is accurate no further action is necessary. If the zero assumed value is not accurate then item update Item 617 Action Code = 4.

Error Message: E 617-CANNOT BE ZERO WHEN 618 IS GREATER THAN ZERO

Cause: Item 617 (Asphalt Area) was coded equal to zero when Item 618 (Flat Value) was coded greater than zero.

Action: Item update Item 617 (Asphalt Area) or Item 618 (Flat Value) depending on which is in error.

Description: The system found that Item 617 (Asphalt Area) was coded equal to zero when Item 618 (Flat Value) was coded greater than zero. The system felt that it was inconsistent to value Asphalt Area when no area was listed. One of the two Items 617 (Asphalt Area) or Item 618 (Flat Value) is in error. Check your records concerning Asphalt Area and item update either Item 617 or 618 depending on which is in error.

FLAT VALUE

Source: Property record card

Required: For all areas paved with asphalt

Data type: Numeric

Enter the depreciated flat value in dollars, right-justified.

Error Printout Explanation:

Error Message: W 618-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 618 (Flat Value) was left blank or was coded/punched with a non-numeric value.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct item update Item 618 Action Code = 4.

Description: The system found that Item 618 (Flat Value) was left blank or was coded or punched with a non-numeric value. The system had no method of calculating a Flat Value so it assumed zeros. If the zero assumed value is correct no further action is necessary. If the zero assumed value is not correct then item update Item 618 (Flat Value) Action Code = 4.

Error Message: E 618-CANNOT BE COMPLETED WHEN ITEM 617 IS NOT

Cause: Item 618 (Flat Value) was coded when Item 617 (Asphalt Area) was not coded.

Action: Item update Item 618 (Flat Value) or Item 617 (Asphalt Area) depending on which is in error.

Description: The system found that Item 618 (Flat Value) was coded when Item 617 (Asphalt Area) was not coded. It is inconsistent to value Asphalt Area when no area exists so the system issued this error message. You should check your records for Asphalt Area and update either Item 617 (Asphalt Area) or Item 618 (Flat Value) Action Code = 4.

OTHER ACCESSORY FLAT ADD VALUES

Source : Property record card

Required: For miscellaneous accessory improvements

Data type: Numeric

Enter the total flat value of accessory improvements not otherwise enumerated on this form which are of definite value, for which individual computations are not warranted, and to which a flat dollar value can be assigned. Enter in dollars, right-justified. Examples include docks, small greenhouses, outdoor barbecues, tool sheds, etc..

Costs that are included in this field are presumed to be already adjusted for locality and time. The Trending and Local Index programs will not effect this value. You must depreciate the items prior to coding their value

If no such improvements exist on the parcel, code this item zero.

Error Printout Explanation:

Error Message: W 619-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 619 (Other Accessory Flat Add Values) was left blank or was coded or punched with a non-numeric value.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then item update Item 619 Action Code = 4.

Description: The system found that Item 619 (Other Accessory Flat Add Values) was left blank or was coded or punched with a non-numeric Value. Since the system had no method of calculating the Flat Value, zeros were assumed. Check your records to ensure that no additional Flat Values should have been coded. If the zero assumed value is correct no action is necessary. If the zero assumed value is not correct item update Item 619 Action Code = 4.

STAFF DATA ITEMS

PART X

701.1

COST BASE YEAR

Source: Property record card

Required: For all parcels

Data type: Date

The month and year, for which the cost factors used in flat add cost and value items were developed, has been entered by the system.

For each month and year, a cost multiplier is available. These multipliers are used to update established replacement cost appraisals to a current value.

The values of the building data and accessory data items have been based on cost data developed in the cost base month and year:

Error Printout Explanation:

Error Message: W 701-BLANK OR NON-NUMERIC, 01/82 ASSUMED

Cause: Item 701 (Cost Base Year) was punched with a non-numeric value.

Action: No action is necessary.

Description: The system found that Item 701 (Cost Base Year) was punched with a non-numeric value. The system assumed a value of 01/82. No action is necessary.

Error Message: W 701-NOT EQUAL 01/82, 01/82 ASSUMED

Cause: Item 701 (Cost Base Year) was punched but it was not equal to 01/82.

Action: No action is necessary - the system assumed 01/82.

Description: The system found that Cost Base Year (Item 701) was punched but the value was not equal to 01/82. The system assumed a value of 01/82. No action is necessary.

CONTINUED REVIEW NEEDED

Source: Property record card, or exterior and interior inspection

Required: For all parcels

Data type: Coded

If the value placed on the land or any principal building on the parcel is one that is not reconcilable with the apparent data, or if there are conditions pertaining to improvements that need special consideration and review, select the code from the following list that most appropriately denotes the condition to be reviewed and enter in the column provided. If the parcel contains no improvements, or if no such condition exists, enter a "0".

0 No review needed

1 Construction of a new principal building is incomplete (see Item 511)

2 Construction of new accessory improvements is incomplete

3 Major remodeling of a principal building is in process

4 Incremental valuation increase due to remodeling

5 Ten year tax incentive - energy generation

6 Property is tax exempt

7 Mobile Home - Personalty

8 Mobile Home - Realty

9 The appraisal was based on estimated conditions

10 This parcel is nonresidential, but has a residential structure on it.

11 All improvements to the parcel are new construction. The computer will compute and install the total improvement value in item 719

12 Replatting or resurvey imminent or in process

13 Major street improvement imminent or in process

14 Periodic flooding, percolation problems, or other water problems exist

15 The name of the parcel owner is not known. It cannot be discovered from the tax roll, mining claim books, or property record card

Error Printout Explanation:

Error Message: W 702-BLANK OR NOT NUMERIC, ZEROS ASSUMED

Cause: Item 702 (Continued Review Needed) was left blank or was coded or punched with a non-numeric value on sheet one of a parcel.

Action: Item update Item 702 (Continued Reveiw Needed) Action Code = 4 if the assumed value of zeros is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 702 (Continued Review Needed) was left blank or was coded or punched with a non-numeric value on sheet one of a parcel. You should check your coding for Item 702 (Continued Review Needed) and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 702-OUT OF RANGE, ZEROS ASSUMED

Cause: Item 702 (Continued Review Needed) was coded greater than 15.

Action: Item update Action Code = 4 if the assumed value of zero (0) is not accurate.

Description: The system encountered a number greater than 15 for Item 702 (Continued Review Needed). The valid range for Item 702 is 0-15. Since a value outside of this range was coded an assumed value of zero (0) was generated. No action is necessary if the assumed value is correct. If the assumed value is not correct item update Action Code = 4.

Error Message: W 702- NOT NUMERIC, ZEROS ASSUMED

Cause: Item 702 (Continued Review Needed) was left blank or was coded or punched with a non-numeric value on a trailing sheet.

Action: Item update Item 702 (Continued Review Needed) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 702 (Continued Review Needed) was left blank or was coded or punched with a non-numeric value on a trailing sheet. You should check your coding for Item 702 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

DATA SOURCES: PROPERTY RECORD CARD

Source: Data collector

Required: For all parcels

DATA type: Coded

If the data entered on the form for the parcel was gathered from the parcel's property record card, enter a "1". Otherwise, enter "0".

Error Printout Explanation:

Error Message: W 703-BLANK OR NON-NUMERIC, 1 ASSUMED

Cause: Item 703 (Data Sources Property Record Card) was left blank or punched with a non-numeric value on sheet one of a parcel.

Action: Item update Item 703 (Property Record Card) Action Code = 4 if the assumed value of yes (1) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 703 (Property Record Card) was left blank or was coded or punched with a non-numeric value on sheet one of a parcel. You should check your coding for Item 703 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 703-BLANK OR NON-NUMERIC, ZERO ASSUMED

Cause: Item 703 (Property Record Card) was left blank or punched with a non-numeric value on a trailing sheet.

Action: Item update Item 703 (Property Record Card) Action Code = 4 if the assumed value of No (0) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 703 (Property Record Card) was left blank or was coded or punched with a non-numeric value on a trailing sheet. You should check your coding for Item 702 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 703-OUT OF RANGE, 1 ASSUMED

Cause: The value coded for Item 703 (Property Record Card) is not within the valid range of responses.

Action: Item update Item 703 (Property Record Card) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 703 (Property Record Card) was not one of the possible valid responses. The valid responses for Item 703 range from 0 to 1. The system assumed a value of yes (1). If Yes is not an accurate response then item update the parcel Action Code = 4. If Yes is an accurate response then no action is necessary.

DATA SOURCES: QUESTIONNAIRE

Source: Data collector

Required: For all parcels

Data type: Coded

If the data entered on the form for the parcel was gathered from the parcel's owner by questionnaire, enter a "1". Otherwise, enter a "0".

Error Printout Explanation:

Error Message: E 704-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 704 (Questionnaire) was left blank or was coded or punched with a non-numeric value.

Action: Item update Item 704 (Questionnaire) Action Code = 4 if the assumed value of No (0) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 704 (Questionnaire) was left blank or was coded or punched with a non-numeric value. You should check your coding for Item 704, and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 704-OUT OF RANGE, ZERO ASSUMED

Cause: The value coded for Item 704 (Questionnaire) is not within the valid range of responses.

Action: Item update Item 704 (Questionnaire) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 704 (Questionnaire) was not one of the possible valid responses. The valid responses for Item 704 range from 0 to 1. The system assumed a value of No (0). If No is not an accurate response then item update the parcel Action Code = 4. If No is an accurate response then no action is necessary.

DATA SOURCES: EXTERNAL INSPECTION

Source: Data collector

Required: For all parcels

Data type: Coded

If the data entered on the form for the parcel was gathered by an exterior inspection (street or yard) of the parcel, enter a "1". Otherwise, enter a "0".

Error Printout Explanation:

Error Message: W 705-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 705 (External Inspection) was left blank or punched with a non-numeric value.

Action: Item update Item 705 (External Inspection) Action Code = 4 if the assumed value of No (0) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 705 (External Inspection) was left blank or was coded or punched with a non-numeric value. You should check your coding for Item 705 and item update any errors Action Code = 4. If the assumed value of No (0) is correct no action is necessary.

Error Message: W 705-OUT OF RANGE, ZEROS ASSUMED

Cause: The value coded for Item 705 (External Inspection) is not within the valid range of responses.

Action: Item update Item 705 (External Inspection) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 705 (External Inspection) was not one of the possible valid responses. The valid responses for Item 705 range from 0 to 1. The system assumed a value of No (0). If No (0) is not an accurate response then item update the parcel action code = 4. If No (0) is an accurate response then no action is necessary.

DATA SOURCES: INTERNAL INSPECTION

Source: Data collector

Required: For all parcels

Data type: Coded

If the data entered on the form for the parcel was gathered by an interior inspection of improvements on the parcel, enter a "1". Otherwise, enter a "0".

Error Printout Explanation:

Error Message: W 706-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 706 (Internal Inspection) was left blank or punched with a non-numeric value.

Action: Item update Item 706 (Internal Inspection) Action Code = 4 if the assumed value of No (0) is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 706 (Internal Inspection) was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 706 and item update any errors Action Code = 4. If the assumed value of No (0) is correct no action is necessary.

Error Message: W 706-OUT OF RANGE, ZEROS ASSUMED

Cause: The value coded for Item 706 (Internal Inspection) is not within the valid range of responses.

Action: Item update Item 706 (Internal Inspection) if the assumed value is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for Item 706 (Internal Inspection) was not one of the possible valid responses. The valid responses for Item 706 range from 0 to 1. The system assumed a value of No (0). If No (0) is not an accurate response then item update the parcel Action Code = 4. If No (0) is an accurate response then no action is necessary.

ENUMERATED BY

Source: Data coder

Required: For all parcels

Data type: Numeric, leading zeros required

Enter the appraiser or clerk number of the data coder, right-justified.

Error Printout Explanation:

Error Message: W 707-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 707 was left blank or was coded or punched with a non-numeric value.

Action: Item update Item 707 (Enumerated By) Action Code = 4.

Description: The system found that Item 707 (Enumerated By) was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 707 and item update any errors Action Code = 4. This message will be followed by the message E 707-EQUAL ZEROS, which informs you that you must item update Item 707 with an appraiser or clerk number.

Error Message: E 707-EQUALS ZERO

Cause: Item 707 (Enumerated By) was coded, punched, or assumed zeros.

Action: Item update Item 707 (Enumerated By) Action Code = 4.

Description: The system found that Item 707 (Enumerated By) was coded, punched or assumed zeros. The system requires that a valid appraisal or clerk number be entered. You should check to see who coded the form and place their appraisal or clerk number on file by item updating Item 707 Action Code = 4.

ENUMERATED ON

Source: Data coder

Required: For all parcels

Data type: Data

Enter the month and year in which you coded the data on land and improvements for the parcel. Be sure to enter both month digits and both year digits.

Error Printout Explanation:

Error Message: W 708-BLANK OR NON-NUMERIC, PREVIOUS MO/YR ASSUMED

Cause: Item 708 (Enumerated On) was left blank or was coded/punched with a non-numeric value on sheet one of a parcel.

Action: Item update Item 708 (Enumerated On) Action Code = 4 if the assumed value of the previous month and year is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 708 (Enumerated On) was left blank or was coded or punched with a non-numeric value on sheet one of a parcel. You should check your coding for Item 708 and item update any errors Action Code 4. If the assumed value is correct no action is necessary. ***Note: The mo/yr assumed was the month previous to processing and the current year.

Error Message: W 708 BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 708 (Enumerated On) was left blank or was coded or punched with a non-numeric value on a trailing sheet of a parcel.

Action: Item update Item 708 (Enumerated On) Action Code = 4 if the assumed value of zeros is not correct. If the assumed value is correct no action is necessary.

Description: The system found the Item 708 (Enumerated On) was left blank or was coded or punched with a non-numeric value on a trailing sheet. You need only code Item 708 on sheet one of each parcel. If the assumed value is correct no action is necessary. You can code Item 708 on trailing sheets if you wish; however, it is not required.

Error Message: W 708-CANNOT BE ZERO OR GREATER THAN 12. PREVIOUS MO/YR ASSUMED

Cause: Item 708 (Enumerated On) month position is either equal to zero of greater than 12.

Action: Item update Item 708 (Enumerated On) Action Code = 4 if the assumed value of the previous month and year are not correct. If the assumed value is correct no action is necessary.

Description: The system found that the month position of Enumerated On (Item 708) was coded equal to 00 or greater than 12. Since the coded value is incorrect the system assumes the previous month and current year. If the assumed value is not correct then item update Item 708 (Enumerated On) Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 708-EXCEEDS CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: The year coded in Item 708 (Enumerated On) exceeds the current calendar year.

Action: No action is necessary if the current year assumed is correct. If the current year is not correct then item update Enumerated On Action Code = 4.

Description: The system found that the value coded in the year position of Item 708 (Enumerated On) was greater than the current calendar year. The system assumes that the current calendar year is correct and moves the current year into the year position. If the assumed current year is not correct item update Item 708 (Enumerated On) Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: E 708-CANNOT BE PRIOR TO 01/82, 01/82 ASSUMED

Cause: The month was coded less than 01 or the year was coded less than 82 on Item 708 (Enumerated On).

Action: Item update Item 708 (Enumerated On) Action Code = 4 if the assumed value of 01/82 was not correct.

Description: The system found that Item 708 (Enumerated On) had the month coded less than 01 or the year coded less than 82. Since all properties must be appraised between 01/82 and 12/85 the system assumed a value of 01/82. If the assumed value is not correct then item update Item 708 (Enumerated On) Action Code = 4. If the assumed value is correct no action is necessary.

IMPROVEMENTS APPRAISED BY

Source: Appraiser or property record card

Required: For all parcels

Data type: Numeric

The Residential-Commercial Bureau will assign a permanent identification number for each Appraiser. Each number will uniquely identify one person and will not be reissued if that person leaves the Department of Revenue. A new number will not be issued if an Appraiser transfers between bureaus or counties. If there are no improvements in 501-560 or 601-619 code a zero.

Error Printout Explanation:

Error Message: E 709-NOT NUMERIC, ZERO ASSUMED

Cause: Item 709 (Improvements Appraised By) was left blank or was coded or punched with a non-numeric value.

Action: Item update Item 709 (Improvements Appraised By) Action Code = 4.

Description: The system found that Item 709 (Improvements Appraised By) was left blank or was coded or punched with a non-numeric value. You should check your coding for Item 709 and item update any errors Action Code = 4.

Error Message: W 709-ITEM MUST BE ZERO - NO IMPROVEMENTS, ZEROS ASSUMED

Cause: Item 709 (Improvements Appraised By) was coded greater than zeros when Items 601 - 619 (Accessory Data) equal zeros and Item 501 Structure Code = Spaces.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct item update Item 709 Action Code = 4.

Description: The system found that Item 709 (Improvements Appraised By) was coded greater than zero when Item 501 (Structure Code) was coded spaces and Items 601-619 (Accessory Data) were coded equal to zero. The system decided that since there were no improvements coded, zeros should be assumed for Item 709 (Improvements Appraised By). If the assumed value is not correct check your coding for Items 501-560 and Items 601-619, and item update any errors Action Code = 4. If you have forgotten to Code Structures in the 500 series or 500 and 600 series you may want to consider using Action Code = 3 replace to add your building information. If the assumed value of zeros was correct no action is necessary.

Error Message: E 709-CANNOT EQUAL ZEROS

Cause: Item 709 (Improvements Appraised By) was coded equal to zeros when Item 501 (Structure Code) was coded and/or Item 601 (Building Type) was coded greater than 0.

Action: Item update Item 709 (Improvements Appraised By) Action Code = 4.

Description: The system found that Item 709 (Improvements Appraised By) was coded equal to zeros when Item 501 (Structure Code) and/or 601 (Building Type) were coded. Since the information that you coded suggested that improvements were located on the parcel the system decided that you should code the appraiser number of the individual appraising the structures. Item update Item 709 (Improvements Appraised By) Action Code = 4. ***Note: If you don't know the appraiser number check with your Appraisal Supervisor, Area Manager or call the Helena Office at 444-2808.

IMPROVEMENTS APPRAISED ON

Source: Appraiser or property record card

Required: For all parcels

Data type: Date

Enter the month and year in which the improvements were appraised (See Item 708). If there are no improvements 501-560 or 601-619 enter a zero.

If the improvements are currently being appraised, the Appraiser will enter today's date. If the improvements were previously appraised and the appraisal data is being entered by the data collector, the appraisal date on the property record card is to be entered. Be sure to enter both month digits and both year digits.

The items necessary for an appraisal of the improvements (as listed in Item 710) are assumed to have been collected on the appraisal date. When a new appraisal of the improvements is completed, at least all items listed and the improvement appraisal date are to be simultaneously updated.

Error Printout Explanation:

Error Message: W 710-NOT NUMERIC WHEN 502-619 EQUAL ZEROS, ZEROS ASSUMED

Cause: Item 710 (Improvements Appraised On) was left blank or was coded/punched with a non-numeric value when Items 501-619 were coded equal to zeros.

Action: No action is necessary zeros were assumed

Description: The system found that Item 710 (Improvements Appraised On) was left blank or was coded/punched with a non-numeric value when Items 501-560 (Building Data) and 601-619 Accessory Data were coded equal to zeros on sheet one of a parcel. The system decided that since no structures were present, no date appraised should be coded and assumed zeros for Item 710. No action should be necessary unless you errored in coding Item 501-619. If such an error was made, consider using the replace option Action Code = 3.

Error Message: W 710-NOT NUMERIC, PREV MONTH AND CURRENT YEAR ASSUMED

Cause: Item 710 (Improvements Appraised On) was left blank or was coded/punched with a non-numeric value when Items 501-619 were coded greater than zero.

Action: Item update Item 710 Action Code = 4 if the assumed value of previous month and current year are not correct.

Description: The system found that Item 710 (Improvements Appraised On) was left blank or was coded/punched with a non-numeric value when Items 501-560 (Building Data) or Items 601-619 (Accessory Data) were coded greater than zero on sheet 01 of a parcel. Since structures were present the system decided that the date that they were appraised should be coded. The system assumed the month the parcel was appraised was the month prior to the date the parcel was processed through the system. The year assumed was the current year. If the assumed value is correct no action is necessary. If the assumed value is not correct then item update Item 710 Action Code = 4.

Error Message: W 710-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 710 (Improvements Appraised On) was left blank or punched with a non-numeric value on a trailing sheet.

Action: Item update Item 710 (Improvements Appraised On) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 710 (Improvements Appraised On) was left blank or was coded/punched with a non-numeric value on a trailing sheet. Improvements appraised on is not required for trailing sheets but you do have the option of coding this value. No action is necessary unless you want a value coded.

Error Message: W 710-CONFLICT WITH 501 and 601, ZEROS ASSUMED

Cause: Item 710 (Improvements Appraised On) was coded greater than zeros on a trailing sheet where Item 501 (Structure Code) = spaces and Item 601 = zeros.

Action: No action is necessary.

Description: Item 710 (Improvements Appraised On) was coded greater than zeros on a trailing sheet where Item 501 (Structure Code) was coded spaces and Item 601 (Building Type) was coded zero. The system felt that since no improvements existed there should be no date appraised on. The system assumed zeros for Item 710. No action should be necessary since the assumed value will generally be correct. If for some reason building data should have been coded you have the option of providing this information.

Error Message: W 710-CANNOT EQUAL ZEROS, PREVIOUS MONTH AND CURRENT YEAR ASSUMED

Cause: Item 710 (Improvements Appraised On) was coded equal to zeros when Items 501-560 and 601-619 were coded greater than zeros.

Action: Item update Item 710 Action Code = 4 if the assumed value of previous month and current year are not correct.

Description: Item 710 (Improvements Appraised By) was coded equal to zeros when Items 501-560 (Building Data) were coded greater than zeros or Items 601-619 were coded greater than zeros. Since improvements exist, the system determined that the date that these improvements were appraised should be coded. The system assumed the previous month and current year for Item 710. If the assumed date is correct no action is necessary. If the assumed date is not correct item update Item 710 Action Code = 4.

Error Message: APPR MONTH CANNOT BE ZERO OR GREATER THAN 12, PREVIOUS MONTH ASSUMED

Cause: Item 710 (Improvements Appraised On) month position was coded less than 0 or greater than 12.

Action: None if the previous month assumed is correct. If the assumed month is not correct then item update Item 710 Action Code = 4.

Description: The system found that the month position of Item 710 (Improvements Appraised On) was coded less than zero or greater than 12. The system assumed the month prior to the date of processing for the month value. If the assumed month value is not correct item update Item 710 Action Code = 4. If the assumed month is correct no action is necessary.

Error Message: E 710-CANNOT BE PRIOR TO 01/82. 01/82 ASSUMED

Cause: Item 710 (Improvements Appraised On) year position was coded less than 82.

Action: No action is necessary if the value of the current year is correctly assumed. If the assumed value is not correct item update Item 710 Action Code = 4.

Description: The system found that the year value in Item 710 (Improvements Appraised On) was coded less than 82. Since the appraisal cycle runs from January 1, 1982 through December 31, 1985 the value coded was incorrect. The system assumed that the correct year was the current year and assumed that value. If the assumed value of current year is correct no further action is necessary. If the assumed value is incorrect item update Item 710 Action Code = 4.

Error Message: W 710-EXCEEDS CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: Item 710 (Improvements Appraised On) was coded with a year value exceeding the current year.

Action: No action is necessary if the assumed value of current year is correct. If the assumed value is incorrect then item update Item 710 Action Code = 4.

Description: The system found that the value coded in Item 710 Improvements Appraised On was coded with a year value which exceeded the current year. The system assumed that the current year was the correct value and assumed that value for Item 710. If the assumed value is not correct item update Item 710 Action Code = 4.

LAND APPRAISED BY

Source: Appraiser or property record card

Required: For all parcels

Data type: Numeric

The Residential-Commercial Bureau will assign a permanent identification number for each Appraiser. Each number will uniquely identify one person and not be reissued if that person leaves the Department of Revenue. A new number will not be issued if an Appraiser transfers between bureaus or counties.

If the parcel contains no land enter zero.

Error Printout Explanation:

Error Message: W 711-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 711 (Land Appraised By) was left blank or was coded or punched with a non-numeric value.

Action: Item update Item 711 (Land Appraised By) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 711 (Land Appraised By) was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 711 (Land Appraised By) and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: E 711-NON-NUMERIC WHEN 301 CODED, ZEROS ASSUMED

Cause: Item 711 (Land Appraised By) was left blank or was coded or punched with a non-numeric value when Item 301 (Unit of Measure) was coded greater than zero.

Action: Item update Item 711 (Land Appraised By) Action Code = 4.

Description: The system found that Item 711 (Land Appraised By) was left blank or was coded/punched with a non-numeric value when Item 301 was coded greater than zero. The system requires that a value be provided in Land Appraised By when land is coded. The system assumed a temporary value of zeros since it didn't know which appraiser number to assume. Item update Item 711 (Land Appraised By) Action Code = 4.

Error Message: E 711-CANNOT EQUAL ZERO WHEN 301 CODED

Cause: Item 711 (Land Appraised On) was coded equal to zero when Item 301 (Unit of Measure) was coded.

Action: Item update Item 711 (Land Data) Action Code = 4.

Description: The system found that Item 711 (Land Data) was coded equal to zero when Item 301 (Unit of Measure) was coded greater than zero. The system requires that a value be entered in Item 711 when land exists on the parcel. Item update Action Code = 4 Item 711 (Land Data).

LAND APPRAISED ON

Source: Appraiser or property record card

Required: For all parcels

Data type: Date

Enter the month and year in which the land was appraised.

If the land is currently being appraised, the Appraiser will enter the current date. If the land was previously appraised and the appraisal data is being entered by the data collector, the appraisal date on the property record card is to be entered. Be sure to enter both month digits and both year digits. If there is no land enter zeros.

Error Printout Explanation:

Error Message: W 712-301 EQUALS ZEROS, ZEROS ASSUMED

Cause: Item 712 (Land Appraised On) was left blank, coded or punched with a non-numeric value, or was coded greater than zeros when Item 301 (Unit of Measure) was coded equal to zero.

Action: No action is necessary if the zero assumed value is correct.

Description: The system found that Item 712 (Land Appraised On) was left blank, was coded/punched with a non-numeric value or was coded greater than zeros when Item 301 (Unit of Measure) was equal to zeros. The system requires that if Item 301 (Unit of Measure) is coded zeros Item 711 (Land Appraised On) must be coded zeros. The system assumed zeros for Item 712 (Land Appraised On). If the assumed value is correct no action is necessary. If the assumed value is not correct check your coding for Item 301 (Unit of Measure) and item update any errors Action Code = 4.

Error Message: W 712-BLANK OR NON-NUMERIC, PREVIOUS MO/YR ASSUMED

Cause: Item 712 (Land Appraised On) was left blank or was coded or punched with a non-numeric value when Item 301 (Unit of Measure) was coded greater than zero.

Action: Item update Item 712 (Land Appraised On) Action Code = 4 if the assumed value of previous month and current year is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 712 (Land Appraised On) was left blank or was coded or punched with a non-numeric value when Item 301 (Unit of Measure) was coded greater than zeros. The system assumed a value of the month previous to the date the record was processed and the previous year for Item 712. You should check your coding for Item 712 and Item 301 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 712-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 712 (Land Appraised On) was coded or punched with a non-numeric value.

Action: Item update Item 712 (Land Appraised On) Action Code = 4 if the assumed value of zeros is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 712 (Land Appraised On) was coded or punched with a non-numeric value. You should check your coding for Item 712 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 712-APPR MONTH CANNOT BE 0 OR GREATER THAN 12, PREVIOUS MONTH ASSUMED

Cause: Item 712 (Land Appraised On) month position was coded equal to zero or greater than 12 on sheet one of a parcel.

Action: No action is required if the assumption of the month previous to processing is accurate. If the month previous is not accurate item update Item 712 Action Code = 4.

Description: The system found that the month position of Item 712 (Land Appraised On) was coded equal to zero or greater than 12. The system assumed that the parcel would have been processed during the most recent month so it assumed a value of the month previous to the processing date. If the assumption was accurate no further action is necessary. If the assumed value is incorrect item update Item 712 Action Code = 4. **Note: You should pay close attention to the assumed value because the system has no method of estimating the amount of time the parcel has been in the "office work" process since the actual appraisal. Estimates of appraisal dates may not be accurate.

Error Message: E 712-CANNOT BE PRIOR TO 01/82, 01/82 ASSUMED

Cause: Item 712 (Land Appraised On) year position was coded less than 82 on sheet one of a parcel.

Action: No action is necessary if the assumed value is correct. If the assumed value is not correct item update Item 712 Action Code = 4.

Description: The system found that Item 712 (Land Appraised On) year position was coded with a year value less than 82. Since the current appraisal cycle runs from January 1, 1982 to December 31, 1985 all appraisal dates must fall within that range. The system assumed a value of 01/82 for the date the land was appraised. If this assumed value is correct no action is necessary. If the assumed value is not correct item update Item 712 (Land Appraised On) Action Code = 4.

Error Message: W 712-EXCEEDS CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: Item 712 (Land Appraised On) year value is coded greater than the current year.

Action: Item update Item 712 if the assumed value of current year is not accurate. If the assumed value is accurate no action is necessary.

Description: The system found that the year position of Item 712 (Land Appraised On) was coded greater than the current year. Since it is impossible to code a date in the future the system assumed a value of the current year for the year position. The month value that you coded was not changed. If the assumed value of current year was not correct item update Item 712 Action Code = 4. If the assumed value is correct no action is necessary.

FIRST PREVIOUS APPRAISED LAND VALUE

Source: Current Assessment (Tax) Roll

Required: For all parcels with land

Data type: Numeric

The land value entered should be the appraised value of land as listed on the most current assessment (tax) roll. Enter the value in whole dollars, right-justified.

The legal description of the parcel described must match exactly the legal description of the parcel on the assessment (tax) roll.

If there is no land with the parcel or the legal descriptions do not exactly match, enter a zero in the right-most column.

Error Printout Explanation:

Error Message: W 713-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 713 (1st Previous Appraised Land Value) was left blank or punched with a non-numeric value when Item 702 continued review needed was coded 04 or 11 on sheet one of a parcel.

Action: Item update Item 713 (1st Previous Appraised Land Value) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 713 (1st Previous Appraised Land Value) was left blank or was coded or punched with a non-numeric value when Item 702 (Continued Review Needed) was coded equal to 4 (Incremental Valuation Increase due to Remodeling) or 11 (All Improvements are New Construction). This situation occurred on sheet one of a parcel and suggested that the parcel had been previously appraised. You should check your coding for Items 713 and Item 702 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 713-BLANK OR NOT NUMERIC, ZEROS ASSUMED

Cause: Item 713 (1st Previous Appraised Land Value) was coded or punched with a non-numeric value when Item 702 (Continued Review Needed) was coded not equal to 4 or 11.

Action: Item update Item 713 (1st Previous Appraised Land Value) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 713 (1st Previous Appraised Land Value) was left blank or was coded or punched with a non-numeric value when Item 702 (Continued Review Needed) was not coded equal to 4 or 11. You should check your coding for Item 713 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 713-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 713 (1st Previous Appraised Land Value) was coded or punched with a non-numeric value.

Action: Item update Item 713 (1st Previous Appraised Land Value) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 713 (1st Previous Appraised Land Value) was coded or punched with a non-numeric value on a trailing sheet. You should check your coding for Item 713 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

FIRST PREVIOUS APPRAISED IMPROVEMENT VALUE

Source: Current Assessment (Tax) Roll

Required: For all parcels with improvements

Data type: Numeric

The improvement value entered should be the appraised value of improvements as listed on the most current assessment (tax) roll. Enter the value in dollars, right-justified.

The legal description of the parcel described must match exactly the legal description of the parcel on the assessment (tax) roll.

If there were no improvements on the parcel or the legal descriptions do not match exactly, enter a zero in the right-most column.

Error Printout Explanation:

Error Message: W 714-BLANK OR NOT NUMERIC, ZEROS ASSUMED

Cause: Item 714 (1st Previous Appraised Improvement Value) was coded or punched with a non-numeric value.

Action: Item update Item 714 (1st Previous Appraised Improvement Value) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 714 (1st Previous Appraised Value Date) was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 714 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

1ST PREVIOUS VALUE DATE

Source: Current Assessment Tax Roll

Required: For all parcels

Date type: Numeric

The 1st previous value date should be the date on which the parcel was last appraised. If the parcel has not been previously appraised then the current date should be used.

Error Message: W 715-NON-NUMERIC, ZEROS ASSUMED

Cause: Item 715 (1st Previous Value Date) was left blank or was coded/punched with a non-numeric value on a trailing sheet.

Action: Item update Item 715 (1st Previous Value Date) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 715 (1st Previous Value Date) was left blank or was coded/punched with a non-numeric value on a trailing sheet. You should check your coding for Item 715 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 715-BLANK OR NON-NUMERIC, CURRENT DATE ASSUMED

Cause: Item 715 (1st Previous Value Date) was left blank or was coded/punched with a non-numeric value on sheet one of a parcel.

Action: Item update Item 715 (1st Previous Value Date) Action Code = 4 if the assumed value of the current date is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 715 (1st Previous Value Date) was left blank or was coded or punched with a non-numeric value on sheet one of a parcel. You should check your coding for Item 715 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 715-MUST BE ZERO IF 713 AND 714 EQUAL ZERO, ZERO ASSUMED

Cause: Item 715 (1st Previous Value Date) was coded when 1st Previous Appraised Improvement and Land Values Items 714 and 713 were coded zero.

Action: No action is necessary if the assumed value of zeros is correct. If the assumed value of zeros is not correct then item update Item 715 and/or Items 714 and 713.

Description: The system found that the coding for Item 715 (1st Previous Value Date) conflicted with Items 713 and 714 (The First Previous Appraised Land and Improvements Date). Since Items 713 and 714 were not coded suggesting that the parcel was not previously appraised, no date should be coded in Item 715. If the assumed value of zeros is correct no further action is necessary. If the assumed value is not correct check your coding for Items 713, 714 and 715 and item update any errors Action Code = 4.

Error Message: W 715-MONTH CANNOT BE 0 OR GREATER THAN 12, PREVIOUS MO/YR ASSUMED

Cause: Item 715 (1st Previous Value Date) was coded with a month less than 1 or greater than 12 and a year less than 82.

Action: Item update Item 715 (1st Previous Value Date) Action Code = 4 if the assumed value is not correct. If the assumed value is correct no further action is necessary.

Description: The system found that the month was coded less than 01 or greater than 12 for Item 715 (1st Previous Value Date). The system also found that the year was coded less than 82. Since the month coded was not a valid value and the year coded was prior to the previous appraisal cycle the system assumed a value of the previous month and past year for Item 715. If the assumed value is incorrect item update Item 715 Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 715-MONTH CANNOT BE 0 OR GREATER THAN 12, PREVIOUS MONTH ASSUMED

Cause: Item 715 month was coded equal to zero or greater than 12.

Action: Item update Item 715 (1st Previous Value Date) Action Code = 4 if the assumed value of previous month is not correct.

Description: The month position of Item 715 (1st Previous Value Date) was coded equal to zero or greater than 12. Since these values are not correct the system assumed a value of the month previous to the date the parcel was processed. If the month previous assumed value is not correct item update Item 715 Action Code = 4. If the assumed value is correct no action is necessary.

Error message: W 715-YEAR CANNOT BE GREATER THAN CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: Item 715 (1st Previous Value Date) was coded with a year greater than the current year on sheet one of a parcel.

Action: No action is necessary if the current year that was assumed is correct. If the current year is not correct item update Item 715 Action Code = 4.

Description: The system found that the year position of Item 715 (1st Previous Value Date) was coded with a year value greater than the current year on sheet one of a parcel. The system assumed a value of the current year for Item 715 (1st Previous Value Date). No action is necessary if the assumed value of current year is correct. If the assumed value of current year is not correct then item update Item 715 Action Code = 4.

PROPERTY CLASS CODE LAND

Source: Current Assessment (Tax) Roll

Required: For all parcels

Data type: Numeric

The Property Class Code is a coding system to identify the different types of taxable property that may be found within a parcel. This should not be confused with Property Type (Item 207) which codes both land and improvements as one. The Property Class Code uniquely codes land and improvements as if each were a separate unit.

The complete Property Class Code coding scheme can be ordered from the Residential-Commercial Bureau.

The type(s) of land property will be listed on the most current assessment (tax) roll. If a parcel has more than one type of land property, be sure that the class code entered corresponds to the land characteristics coded for the parcel in the Land Data Section (301-309). If there is no land, code a zero.

Error Printout Explanation:

Error Message: W 716-OUT OF RANGE, 2201 ASSUMED

Cause: Item 716 (Property Class Code Land) was coded with a value less than 1101 or greater than 3909.

Action: Item update Item 716 (Property Class Code Land) Action Code = 4 if the assumed value of 2201 is not correct. If the assumed value is correct no action is necessary.

Description: Item 716 (Property Class Code Land) was coded with a value less than 1101 or greater than 3909. Values outside of this range are incorrect. The system assumed a value of 2201 for the Land Property Class Code. If the assumed value of 2201 is correct no action is necessary. If the assumed value is not correct item update the parcel Action Code = 4.

Error Message: W 716-BLANK OR NOT NUMERIC, 2201 ASSUMED

Cause: Item 716 (Property Class Code Land) was left blank or was coded/punched with a non-numeric value.

Action: Item update Item 716 (Property Clss Code Land) Action Code = 4 if the assumed value of 2201 is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 716 (Property Class Code Land) was left blank or was coded or punched with a non-numeric value. The system assumed a value of 2201. You should check your coding for Item 716 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 716-INVALID PROPERTY CLASS CODE, 2201 ASSUMED

Cause: Item 716 (Property Class Code Land) was coded with a value that was not found in the table of Property Class Codes.

Action: Item update Item 716 Action Code = 4 if the assumed value of 2201 is not correct. If the assumed value is correct no action is necessary.

Description: The system found that when it searched the table of Property Class Codes that are valid for Item 716 (Property Class Codes Land) it did not find the value that you coded. The system assumed a value of 2201. If the assumed value is correct no action is necessary. If the assumed value is not correct then check your listing of Property Classification Codes and ensure that you are using the correct code. If you are using a valid code and the system is rejecting that code notify the Helena Office. Item update any errors Action Code = 4.

PROPERTY CLASS CODE IMPROVEMENTS

Source: Current Assessment (Tax) Roll

Required: For all parcels

Data type: Numeric

The Property Class Code is a coding system to identify the different types of taxable property that may be found within a parcel. This should not be confused with Property Type (Item 207) which codes both land and improvements as one. The Property Class Code uniquely codes land and improvements as if each were a separate unit.

The complete Property Class Code coding scheme can be ordered from the Residential-Commercial Bureau.

The type(s) of improvement property will be listed on the most current assessment (tax) roll. If a parcel has more than one type of property improvement, be sure that the class code entered on sheet corresponds to the improvement characteristics coded for the parcel in the 500 and 600 Items. If there are no improvements in Items 501-560 or 601-619, code a zero.

Error Printout Explanation:

Error Message: W 717-OUT OF RANGE, 3501 ASSUMED

Cause: Item 717 (Property Class Code Improvements) was coded less than 1101 or greater than 3909.

Action: Item update Item 716 Action Code = 4 if the assumed value of 3501 is incorrect. If the assumed value is correct no action is necessary.

Description: Item 717 (Property Class Code Improvements) was coded with a value which was greater than 3909 or less than 1101. Values outside this range are not valid. The system assumed a value of 3501. If the assumed value is correct no action is necessary. If the assumed value of 3501 is not correct item update Item 717 Action Code = 4.

Error Message: W 717-BLANK OR NOT NUMERIC, 3501 ASSUMED

Cause: Item 717 (Property Class Code Improvements) was left blank or was coded/punched with a non-numeric value.

Action: Item update Item 717 (Property Class Code Improvements) Action Code = 4 if the assumed value of 3501 is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 717 (Property Class Code Improvements) was left blank or was coded/punched with a non-numeric value. You should check your Property Classification Code Listing and item update any errors Action Code = 4. If the assumed value is correct no action is necessary. If the value you coded is listed in the Classification Codes and is valid but the system rejected the value, notify the Helena Office.

Error Message: W 717-INVALID PROPERTY CLASS CODE, 3501 ASSUMED

Cause: Item 717 (Property Class Code Improvements) was coded with a value not listed in the Table of Property Class Codes.

Action: Item update Item 717 Action Code = 4 if the assumed value of 3501 is not correct.

Description: The system found that the value coded for Item 717 (Property Class Code Improvements) was not listed in the Table of Property Class Codes. The system searched the table, code by code, but did not find a match for the value that you coded. The system assumed a value of 3501. If the assumed value is correct no further action is necessary. If the value is not correct item update Item 717 Action Code = 4. If the value that you coded is a valid improvement Class Code listed in the Property Classification Codes list and the system rejected it please notify the Helena Office.

YEAR NEW CONSTRUCTION

Source: Appraiser or property record card

Required: For all parcels with new construction

Data type: Date (last two digits of year)

Enter the year (the last two digits) that the value of the new construction, entered in Appraised Value of New Construction (Item 719), will be used to compute the certified mill levy. If this item is not used enter a zero.

Error Printout Explanation:

Error Message: E 718-MUST BE CODED WHEN 719 CODED

Cause: Item 718 (Year New Construction) was coded equal to zeros when Item 719 (Appraised Value New Construction) was coded greater than zeros.

Action: Item update Item 718 Action Code = 4.

Description: The system found that a value had been coded in Item 719 (Appraised Value New Construction) when Item 718 (Year New Construction) was coded equal to zeros. If a value was coded the system requires that a year also be coded. Item update Item 718 Action Code = 4 with the correct year. If Item 718 should equal zeros then check your coding for Item 719 and item update any errors Action Code = 4.

Error Message: W 718-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 718 (Year New Construction) was left blank or was coded/punched with a non-numeric value on a trailing sheet.

Action: Item update Item 718 (Year New Construction) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 718 (Year New Construction) was left blank or was coded or punched with a non-numeric value on a trailing sheet. You should check your coding for Item 718 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 718-BLANK OR NON-NUMERIC, CURRENT YEAR ASSUMED

Cause: Item 718 (Year New Construction) was left blank or was coded/punched with a non-numeric value when Item 702 was coded equal to 01 or 02 on sheet one of a parcel.

Action: Item update Item 718 (Year New Construction) Action Code = 4 if the assumed value of current year is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 718 (Year New Construction) was left blank or was coded or punched with a non-numeric value when Item 702 (Continued Review Needed) was coded equal to 01 (Construction of a New Principal Building is Incomplete) or 02 (Construction of New Accessory Improvement is Incomplete). The system assumes that since New Construction is incomplete the current year should be assumed for the year of new construction. You should check your coding for Item 718 and Item 702 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 718-NOT NUMERIC, ZEROS ASSUMED

Cause: Item 718 (Year New Construction) was left blank or was coded/punched with a non-numeric value.

Action: Item update Item 718 (Year New Construction) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 718 (Year New Construction) was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 718 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: W 718-EXCEEDS CURRENT YEAR, CURRENT YEAR ASSUMED

Cause: Item 718 (Year New Construction) was coded with a value greater than the current year.

Action: Item update Item 718 Action Code = 4 if the value of current year that was assumed is not correct. If the assumed value is correct no action is necessary.

Description: The system found that the value coded for year in Item 718 (Year New Construction) was greater than the current year. The system assumed a value of the current year for Item 718. If the assumed value is correct no action is necessary. If the assumed value of current year is not correct then item update Item 718 Action Code = 4.

APPRAISED VALUE OF NEW CONSTRUCTION

Source: Appraiser or property record card

Required: For all parcels with new construction

Data type: Numeric

Enter the appraised value of the new construction in whole dollars.

If all the improvement value is new construction or remodeling.

a) Code Continued Review needed on Improvements (Item 702) = 1.

b) Enter the year (the last two digits of the year) the value of the new construction will be used to compute the certified mill levy in Year New Construction (Item 718).

c) Enter the appraised value of the new construction (right-justified) in Appraised Value New Construction (Item 719).

A report will be generated listing those properties in a county with new construction upon request.

Error Printout Explanation:

Error Message: W 719-BLANK OR NON-NUMERIC, ZEROS ASSUMED

Cause: Item 719 (Appraised Value New Construction) was left blank or was coded/punched with a non-numeric value.

Action: Item update Item 719 (Year New Construction) Action Code = 4 if the assumed value of zero is not correct. If the assumed value is correct no action is necessary.

Description: The system found that Item 719 was left blank or was coded/punched with a non-numeric value. You should check your coding for Item 719 and item update any errors Action Code = 4. If the assumed value is correct no action is necessary.

Error Message: E 719-MUST BE CODED WHEN YEAR NEW CONSTRUCTION IS CODED

Cause: Item 718 (Year New Construction) was coded greater than zeros when Item 719 (Appraised Value New Construction) was coded equal to zeros.

Action: Item update Item 719 (Appraised Value New Construction) Action Code = 4.

Description: The system found that Item 719 (Appraised Value New Construction) was coded equal to zeros when Item 718 (Year New Construction) was coded greater than zeros. The system issued this message because the coding for Item 718 indicates that New Construction is present. You should check your coding for Items 718 and 719 and item update any errors Action Code = 4.

Error Message: W 719-MUST BE ZEROS WHEN 718 IS ZEROS, ZEROS ASSUMED

Cause: Item 718 (Year New Construction) was coded equal to zeros when Item 719 (Appraised Value New Construction) was coded greater than zeros.

Action: No action is necessary if the zero assumed value is correct. If the zero assumed value is not correct then item update Item 719 Action Code = 4.

Description: The system found that Item 719 (Appraised Value New Construction) was coded greater than zeros when Item 718 (Year New Construction) was coded equal to zeros. It is inconsistent to have Item 718 coded equal to zeros and Item 719 coded greater than zeros. You should check your coding for both items 718 and 719 and update any errors Action Code = 4.

RESIDENTIAL SPECIFICATIONS AND PRICING LADDERS

Rev. 03/84

QUALITY GRADE 1 F-1

GRADE 1F-1

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - Wood sills on masonry or stone piers

Floors - Single softwood over minimal joists

Roof - Low pitch; wood frame; cheap sheathing; roll roofing

Exterior - Wood frame; minimal siding

Interior - Wood frame; wallboard walls and ceiling

Plumbing - None included in base cost schedule

Electrical - Substandard fixtures and outlets

Heating - None included in base cost schedule

Insulation - None included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - Unreinforced concrete or concrete block

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

BASEMENT FINISH SPECIFICATIONS

Floor - Inferior carpet

Interior - Furring; vapor barrier; wallboard; frame interior partitions

Ceiling - Wallboard

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Inferior carpet

Interior - Frame Interior Construction; wallboard (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be the same quality as the residence.

GARAGE SPECIFICATIONS

Foundation - Concrete; concrete block; stone or wood piers

Floors - No floor included in base cost schedule

Roof - Low pitch; wood frame; roll roofing

*Exterior - Wood frame; light studs; minimal siding

Interior - Unfinished - No wallboard; hinged door; no windows

- Finished - Wallboard; hinged door; no windows

Electrical - None included in base cost schedule

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - Unreinforced concrete or concrete block; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No wall board; floor drain

- Finished - Fireproofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

GRADE 1F-1

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

- Finished - Frame, wallboard or plywood finish and minimum partitions

Electrical - Unfinished - None included in base cost schedule

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-1

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete; mesh reinforcing; judged to be same quality as residence.

GRADE 1F-1 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	24.06	24.19	19.78	19.25	19.35	15.82	22.14	22.25	18.20	11.60	7.33
200	21.83	21.95	18.35	17.46	17.56	14.68	20.08	20.19	16.88	9.80	6.56
300	20.63	20.74	17.56	16.50	16.59	14.05	18.98	19.08	16.16	8.88	6.22
400	19.81	19.92	17.02	15.85	15.94	13.62	18.23	18.33	15.66	8.27	6.02
500	19.20	19.30	16.62	15.36	15.44	13.30	17.66	17.76	15.29	7.83	5.88
600	18.71	18.81	16.30	14.97	15.05	13.04	17.21	17.31	15.00	7.49	5.79
700	18.33	18.43	16.05	14.66	14.74	12.84	16.86	16.96	14.77	7.21	5.70
800	17.96	18.06	15.84	14.37	14.45	12.67	16.52	16.62	14.57	6.98	5.64
900	17.69	17.78	15.64	14.15	14.22	12.51	16.27	16.36	14.39	6.79	5.58
1000	17.42	17.52	15.45	13.94	14.02	12.36	16.03	16.12	14.21	6.61	5.54
1100	17.18	17.27	15.28	13.74	13.82	12.22	15.81	15.89	14.06	6.47	5.50
1200	16.97	17.06	15.13	13.58	13.65	12.10	15.61	15.70	13.92	6.33	5.47
1300	16.78	16.87	14.99	13.42	13.50	11.99	15.44	15.52	13.79	6.20	5.43
1400	16.62	16.71	14.86	13.30	13.37	11.89	15.29	15.37	13.67	6.09	5.41
1500	16.47	16.55	14.76	13.18	13.24	11.81	15.15	15.23	13.58	5.99	5.39
1600	16.31	16.40	14.66	13.05	13.12	11.73	15.01	15.09	13.49	5.90	5.37
1700	16.17	16.26	14.57	12.94	13.01	11.66	14.88	14.96	13.40	5.81	5.35
1800	16.03	16.12	14.48	12.82	12.90	11.58	14.75	14.83	13.32	5.73	5.33
1900	15.91	15.99	14.39	12.73	12.79	11.51	14.64	14.71	13.24	5.66	5.32
2000	15.80	15.89	14.31	12.64	12.71	11.45	14.54	14.62	13.17	5.60	5.30
2100	15.70	15.78	14.23	12.56	12.62	11.38	14.44	14.52	13.09	5.53	5.29
2200	15.59	15.68	14.16	12.47	12.54	11.33	14.34	14.43	13.03	5.46	5.27
2300	15.49	15.57	14.09	12.39	12.46	11.27	14.25	14.32	12.96	5.40	5.25
2400	15.40	15.49	14.03	12.32	12.39	11.22	14.17	14.25	12.91	5.34	5.24
2500	15.32	15.40	13.97	12.26	12.32	11.18	14.09	14.17	12.85	5.29	5.23
2600	15.23	15.31	13.91	12.18	12.25	11.13	14.01	14.09	12.80	5.24	5.22
2700	15.14	15.22	13.85	12.11	12.18	11.08	13.93	14.00	12.74	5.19	5.21

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ .64 /SQ. FT.	$ .45 /SQ. FT.	$ .19 /SQ. FT.
CLASS D VENEER	$ .59 /SQ. FT.	$ .40 /SQ. FT.	$ .18 /SQ. FT.
CLASS D	$ .52 /SQ. FT.	$ .34 /SQ. FT.	$ .16 /SQ. FT.
(DEDUCTION FROM BASE)			

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $13.75/SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 3.16 PER SQ. FT.

GRADE 1F-1 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	7.32	7.76	5.74	7.32	7.76	5.74	4.40	2.97	$ 1,086	$ 355
200	5.66	6.07	4.47	5.66	6.07	4.47	3.36		$ 1.975	$ 414
300	5.01	5.36	4.05	5.01	5.36	4.05	2.89		$ 2,815	$ 474
400	4.42	4.66	3.62	4.42	4.66	3.62	2.62		$ 3,604	$ 543
500	4.23	4.42	3.53	4.23	4.42	3.53	2.43		$ 4,345	$ 610
600	4.09	4.23	3.39	4.09	4.23	3.39	2.29		$ 5,086	$ 676
700	3.94	4.10	3.34	3.94	4.10	3.34	2.19		$ 5,826	$ 740
800	3.80	3.95	3.25	3.80	3.95	3.25	2.10		$ 6,518	$ 802
900	3.53	3.29	3.06	3.53	3.29	3.06	2.03		$ 7,209	$ 862
1000	3.50	3.26	3.01	3.50	3.26	3.01	1.97		$ 7,900	$ 918
1100	3.45	3.22	2.96	3.45	3.22	2.96	1.91		$ 8,591	$ 972
1200	3.40	3.18	2.92	3.40	3.18	2.92	1.87		$ 9,233	$1024
1300	3.37	3.14	2.87	3.37	3.14	2.87	1.83		$ 9,924	$1074
1400	3.33	3.10	2.82	3.33	3.10	2.82	1.79		$10,566	$1121

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$570	$228
UPPER STORIES	$107	
PRE-FAB FIREPLC/STV	$448	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 57.48
CONCRETE	$114.96
GUNITE	$152.90
FIBERGLASS	$ 97.72

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$221
VACUUM CLEANER SYSTEM	
-3 OUTLETS	$412
INTERCOM, MASTER STATION	$125
-ADD PER OUTLET	$ 24
SAUNA	$633
FOLDING STAIRWAY	$ 96
GARAGE DOOR OPENER	$190
GARAGE HEAT	$.60/SQ.F
INSULATION	$.30/SQ.F

ATTACHED GARAGE

COMMON WALL DEDUCTION

$12.22	PER LINEAL FOOT (CLASS C)
$13.78	PER LINEAL FOOT (CLASS D VENEER)
$11.24	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 3.77 PER SQ. FT. (CEILING & FLOOR)	$ 3.81 PER SQ. FT. (CEILING & FLOOR)
$ .45 /SQ. FT. OF WALL AREA	$ .52 /SQ. FT. WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$683	1 CAR	$498
1 CAR	$683	1 CAR	$498
2 CAR	$908	2 CAR	$576

BUILT-INS

$139 PER BUILT-IN

PLUMBING

$213 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 3.00 PER SQ. FT.

CONCRETE

$ 1.06 PER SQ. FT.

PAVING

$ .78 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-2

QUALITY GRADE 1 F-2

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - Concrete; concrete block; stone or wood piers

Floors - Single softwood over minimal joists

Roof - Low pitch; wood frame; 1" spaced sheathing; cheap composition roof

Exterior - Wood frame; light studs or box frame; cheap siding

Interior - Wood frame; wallboard or inferior drywall

Plumbing - Cheap fixtures, includes toilet, lavatory, kitchen sink, and water heater

Electrical - Minimum fixtures and wiring, substandard by most codes

Heating - None included in base cost schedule

Insulation - None included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - Concrete or concrete block

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-2

BASEMENT FINISH SPECIFICATIONS

Floor - Cheap carpet

Interior - Furring; vapor barrier; cheap gypsum board, taped and painted; frame interior partitions

Ceiling - Cheap gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area.

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Cheap carpet

Interior - Frame Interior Construction; cheap gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-2

GARAGE SPECIFICATIONS

Foundation - Concrete; concrete block; stone or wood piers

Floors - No floor included in base cost schedule

Roof - Low pitch; wood frame; cheap composition roof

*Exterior - Wood frame; light studs; cheap siding

Interior - Unfinished - No wallboard; cheap overhead or hinged door; sometimes one window

Electrical - None included in base cost schedule

Heating - None included in base cost schedule

* Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - Concrete or concrete block; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No wallboard; floor drain

Finished - Fireproofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

Finished - Frame, drywall or plywood finish and minimum partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-2

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence.

GRADE 1F-2 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	28.63	28.54	23.55	22.90	22.83	18.84	26.34	26.26	21.67	11.60	7.95
200	25.98	25.90	21.84	20.78	20.72	17.47	23.90	23.83	20.09	9.80	7.14
300	24.55	24.47	20.91	19.64	19.58	16.73	22.59	22.51	19.24	8.88	6.77
400	23.57	23.50	20.26	18.86	18.80	16.21	21.68	21.62	18.64	8.27	6.55
500	22.85	22.78	19.79	18.28	18.22	15.83	21.02	20.96	18.21	7.83	6.40
600	22.27	22.20	19.40	17.82	17.76	15.52	20.49	20.42	17.85	7.49	6.30
700	21.81	21.74	19.11	17.45	17.39	15.29	20.07	20.00	17.58	7.21	6.21
800	21.38	21.31	18.85	17.10	17.05	15.08	19.67	19.61	17.34	6.98	6.15
900	21.04	20.98	18.61	16.83	16.78	14.89	19.36	19.30	17.12	6.79	6.08
1000	20.73	20.67	18.39	16.58	16.54	14.71	19.07	19.02	16.92	6.61	6.04
1100	20.44	20.38	18.19	16.35	16.30	14.55	18.80	18.75	16.73	6.47	6.00
1200	20.19	20.13	18.01	16.15	16.10	14.41	18.57	18.52	16.57	6.33	5.97
1300	19.97	19.90	17.84	15.98	15.92	14.27	18.37	18.31	16.41	6.20	5.94
1400	19.78	19.72	17.69	15.82	15.78	14.15	18.20	18.14	16.27	6.09	5.90
1500	19.59	19.53	17.57	15.67	15.62	14.06	18.02	17.97	16.16	5.99	5.88
1600	19.41	19.35	17.46	15.53	15.48	13.97	17.86	17.80	16.06	5.90	5.86
1700	19.24	19.18	17.35	15.39	15.34	13.88	17.70	17.65	15.96	5.81	5.84
1800	19.07	19.02	17.24	15.26	15.22	13.79	17.54	17.50	15.86	5.73	5.82
1900	18.93	18.87	17.13	15.14	15.10	13.70	17.42	17.36	15.76	5.66	5.80
2000	18.80	18.75	17.03	15.04	15.00	13.62	17.30	17.25	15.67	5.60	5.79
2100	18.68	18.62	16.94	14.94	14.90	13.55	17.19	17.13	15.58	5.53	5.76
2200	18.56	18.50	16.85	14.85	14.80	13.48	17.08	17.02	15.50	5.46	5.75
2300	18.43	18.38	16.78	14.74	14.70	13.42	16.96	16.91	15.44	5.40	5.74
2400	18.33	18.27	16.70	14.66	14.62	13.36	16.86	16.81	15.36	5.34	5.73
2500	18.22	18.17	16.63	14.58	14.54	13.30	16.76	16.72	15.30	5.29	5.71
2600	18.12	18.07	16.56	14.50	14.46	13.25	16.67	16.62	15.24	5.24	5.70
2700	18.02	17.96	16.48	14.42	14.37	13.18	16.58	16.52	15.16	5.19	5.70

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ .73 /SQ. FT.	$ .51 /SQ. FT.	$ .22 /SQ. FT.
CLASS D VENEER	$ .66 /SQ. FT.	$ .45 /SQ. FT.	$ .20 /SQ. FT.
CLASS D	$ .60 /SQ. FT.	$ .38 /SQ. FT.	$ .18 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $17.91 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 3.38 PER SQ. FT.

GRADE 1F-2 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	9.65	9.93	7.48	9.65	9.93	7.48	4.70	3.31	$ 1,293	$ 423
200	7.41	7.76	5.79	7.41	7.76	5.79	3.58		$ 2,350	$ 493
300	6.60	6.85	5.27	6.60	6.85	5.27	3.09		$ 3,349	$ 564
400	5.80	5.93	4.70	5.80	5.93	4.70	2.80		$ 4,289	$ 646
500	5.51	5.64	4.56	5.51	5.64	4.56	2.60		$ 5,171	$ 726
600	5.32	5.41	4.42	5.32	5.41	4.42	2.45		$ 6,052	$ 805
700	5.13	5.24	4.33	5.13	5.24	4.33	2.33		$ 6,933	$ 881
800	4.99	5.08	4.19	4.99	5.08	4.19	2.24		$ 7,756	$ 955
900	4.72	4.39	4.00	4.72	4.39	4.00	2.16		$ 8,579	$1025
1000	4.69	4.37	3.95	4.69	4.37	3.95	2.10		$ 9,401	$1093
1100	4.63	4.32	3.90	4.63	4.32	3.90	2.04		$10,224	$1157
1200	4.56	4.26	3.86	4.56	4.26	3.86	1.99		$10,988	$1219
1300	4.52	4.21	3.81	4.52	4.21	3.81	1.95		$11,810	$1278
1400	4.47	4.17	3.76	4.47	4.17	3.76	1.91		$12,574	$1334

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$737	$295
UPPER STORIES	$161	
PRE-FAB FIREPLC/STV	$536	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 58.66
CONCRETE	$117.32
GUNITE	$156.04
FIBERGLASS	$ 99.72

FLAT ADDS (ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$276
VACUUM CLEANER SYSTEM -3 OUTLETS	$514
INTERCOM, MASTER STATION	$156
-ADD PER OUTLET	$ 29
SAUNA	$719
FOLDING STAIRWAY	$112
GARAGE DOOR OPENER	$202
GARAGE HEAT	$.60/SQ.FT
INSULATION	$.30/SQ.FT

ATTACHED GARAGE COMMON WALL DEDUCTION

$16.16	PER LINEAL FOOT (CLASS C)
$17.45	PER LINEAL FOOT (CLASS D VENEER)
$13.22	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 4.13 PER SQ. FT. (CEILING & FLOOR)	$ 4.20 PER SQ. FT. (CEILING & FLOOR)
$ .48 /SQ. FT. OF WALL AREA	$ .55 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 718	1 CAR	$ 524
2 CAR	$ 955	2 CAR	$ 606

BUILT-INS

$175 PER BUILT-IN

PLUMBING

$237 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 3.50 PER SQ. FT.

CONCRETE

$ 1.18 PER SQ. FT.

PAVING

$ .80 PER SQ. FT.

ENCLOSED PORCH: 50% OF FIRST FLOOR BASE COST
OPEN PORCH: 30% OF FIRST FLOOR BASE COST
PATIO OR DECK: 20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-3

QUALITY GRADE 1 F-3

QUALITY GRADE 1 F-3

GRADE 1F-3

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 6"-8" reinforced concrete or concrete block perimeter

Floors - Softwood; shiplap or plywood sub-floor on 2" x 6" joists, 16" on center; vinyl asbestos tile or linoleum

Roof - Medium to low pitch; wood frame; sheathing; fair wood or composition shingles

Exterior - Wood frame; cheap brick; wood sheathing; fair siding or stucco

Interior - Frame; drywall or paneling; little trim; few closets; plain

Plumbing - Minimum low cost fixtures, includes lavatories, toilets, bathtubs, kitchen sink, water heater; One bath included in base cost schedule

Electrical - Plain fixtures and few outlets

Heating - Wall furnace

Insulation - None included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 6"-8" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-3

BASEMENT FINISH SPECIFICATIONS

Floor - Low cost carpet

Interior - Furring; vapor barrier; low cost gypsum board, taped and painted; frame interior partitions

Ceiling - Low cost gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Low cost carpet

Interior - Frame Interior Construction; low cost gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-3

GARAGE SPECIFICATIONS

Foundation - Concrete or block foundation

Floors - Unreinforced slab

Roof - 2" x 4" rafters; gable roof; composition or asphalt shingles

*Exterior - Light frame; low cost brick or block; low cost stucco or siding

Interior - Unfinished - No wallboard - low cost overhead or hinged door; one window

- Finished - Wallboard; low cost overhead or hinged door; one window

Electrical - Minimal lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 6" - 8" reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board or wallboard; floor drain

- Finished - Fire proofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

Finished - Frame, drywall or plywood finish and minimum partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-3

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence

GRADE 1F-3 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	33.22	32.92	27.27	26.58	26.34	21.82	30.56	30.29	25.09	11.60	8.96
200	30.07	29.80	25.24	24.06	23.84	20.19	27.66	27.42	23.22	9.80	8.08
300	28.38	28.12	24.13	22.70	22.50	19.30	26.11	25.87	22.20	8.88	7.69
400	27.22	26.97	23.36	21.78	21.58	18.69	25.04	24.81	21.49	8.27	7.46
500	26.36	26.12	22.80	21.09	20.90	18.24	24.25	24.03	20.98	7.83	7.30
600	25.67	25.44	22.34	20.54	20.35	17.87	23.62	23.40	20.55	7.49	7.18
700	25.13	24.90	21.99	20.10	19.92	17.59	23.12	22.91	20.23	7.21	7.09
800	24.61	24.39	21.68	19.69	19.51	17.34	22.64	22.44	19.95	6.98	7.02
900	24.22	24.00	21.40	19.38	19.20	17.12	22.28	22.08	19.69	6.79	6.96
1000	23.85	23.63	21.14	19.08	18.90	16.91	21.94	21.74	19.45	6.61	6.91
1100	23.50	23.29	20.90	18.80	18.63	16.72	21.62	21.43	19.23	6.47	6.86
1200	23.21	23.00	20.68	18.57	18.40	16.54	21.35	21.16	19.03	6.33	6.82
1300	22.94	22.73	20.48	18.35	18.18	16.38	21.10	20.91	18.84	6.20	6.79
1400	22.72	22.51	20.31	18.18	18.01	16.25	20.90	20.71	18.69	6.09	6.76
1500	22.50	22.29	20.15	18.00	17.83	16.12	20.70	20.51	18.54	5.99	6.73
1600	22.27	22.07	20.02	17.82	17.66	16.02	20.49	20.30	18.42	5.90	6.70
1700	22.08	21.88	19.89	17.66	17.50	15.91	20.31	20.13	18.30	5.81	6.68
1800	21.88	21.68	19.76	17.50	17.34	15.81	20.13	19.95	18.18	5.73	6.66
1900	21.71	21.51	19.63	17.37	17.21	15.70	19.97	19.79	18.06	5.66	6.65
2000	21.56	21.37	19.52	17.25	17.10	15.62	19.84	19.66	17.96	5.60	6.63
2100	21.41	21.22	19.41	17.13	16.98	15.53	19.70	19.52	17.86	5.53	6.61
2200	21.27	21.07	19.30	17.02	16.86	15.44	19.57	19.38	17.76	5.46	6.60
2300	21.12	20.93	19.21	16.90	16.74	15.37	19.43	19.26	17.67	5.40	6.59
2400	21.00	20.80	19.13	16.80	16.64	15.30	19.32	19.14	17.60	5.34	6.56
2500	20.87	20.68	19.04	16.70	16.54	15.23	19.20	19.03	17.52	5.29	6.55
2600	20.75	20.56	18.95	16.60	16.45	15.16	19.09	18.92	17.43	5.24	6.54
2700	20.63	20.44	18.86	16.50	16.35	15.09	18.98	18.80	17.35	5.19	6.53

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ .83 /SQ. FT.	$ .58 /SQ. FT.	$ .25 /SQ. FT.
CLASS D VENEER	$ .75 /SQ. FT.	$ .50 /SQ. FT.	$ .22 /SQ. FT.
CLASS D	$ .68 /SQ. FT.	$ .44 /SQ. FT.	$ .20 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $22.06 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 3.93 PER SQ. FT.

GRADE 1F-3 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	12.69	12.75	9.69	12.69	12.75	9.69	5.07	3.69	$ 1,538	$ 503
200	9.79	9.88	7.48	9.79	9.88	7.48	3.87		$ 2,797	$ 587
300	8.69	8.75	6.77	8.69	8.75	6.77	3.33		$ 3,986	$ 671
400	7.60	7.62	6.07	7.60	7.62	6.07	3.02		$ 5,104	$ 769
500	7.27	7.24	5.88	7.27	7.24	5.88	2.80		$ 6,153	$ 864
600	6.94	6.87	5.69	6.94	6.87	5.69	2.64		$ 7,202	$ 958
700	6.75	6.69	5.55	6.75	6.69	5.55	2.52		$ 8,250	$1049
800	6.51	6.49	5.41	6.51	6.49	5.41	2.42		$ 9,230	$1136
900	6.34	5.92	5.22	6.34	5.92	5.22	2.33		$10,209	$1220
1000	6.27	5.86	5.17	6.27	5.86	5.17	2.26		$11,188	$1301
1100	6.21	5.80	5.13	6.21	5.80	5.13	2.20		$12,166	$1377
1200	6.12	5.72	5.08	6.12	5.72	5.08	2.15		$13,075	$1451
1300	6.06	5.65	5.03	6.06	5.65	5.03	2.11		$14,054	$1521
1400	5.99	5.59	4.99	5.99	5.59	4.99	2.06		$14,963	$1587

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$903	$361
UPPER STORY	$214	
PRE-FAB FIREPLC/STV	$624	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 59.85
CONCRETE	$119.69
GUNITE	$159.19
FIBERGLASS	$101.74

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$332
VACUUM CLEANER SYSTEM -3 OUTLETS	$617
INTERCOM, MASTER STATION	$187
-ADD PER OUTLET	$ 35
SAUNA	$804
FOLDING STAIRWAY	$128
GARAGE DOOR OPENER	$214
GARAGE HEAT	$.60/SQ.FT
INSULATION	$.30/SQ.FT

ATTACHED GARAGE

COMMON WALL DEDUCTION

$21.39	PER LINEAL FOOT (CLASS C)
$22.06	PER LINEAL FOOT (CLASS D VENEER)
$17.88	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 4.77 PER SQ. FT. (CEILING & FLOOR)	$ 4.89 PER SQ. FT. (CEILING & FLOOR)
$ .51 /SQ. FT. OF WALL AREA	$ .59 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 753	1 CAR	$ 549
2 CAR	$1001	2 CAR	$ 635

BUILT-INS

$211 PER BUILT-IN

PLUMBING

$261 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 4.00 PER SQ. FT.

CONCRETE

$ 1.31 PER SQ. FT.

PAVING

$ .83 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-4

QUALITY GRADE 1 F-4

QUALITY GRADE 1 F-4

QUALITY GRADE 1 F-4

QUALITY GRADE 1 F-4

GRADE 1F-4

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 6"-8" reinforced concrete perimeter

Floors - Hardwood; 1" sub-floor on 2" x 8" joists, 16" on center; fair carpet or asphalt tile

Roof - Medium pitch; 3/4" sheathing; asphalt shingle or built-up

Exterior - Wood frame; block or brick; wood sheathing; average siding, stucco, pumice block

Interior - Frame; plaster or drywall; some trim; average closets and storage

Plumbing - Average fixtures - includes lavatories, toilets, bathtubs, kitchen sink, water heater, and laundry facilities; One bath included in base cost schedule

Electrical - Standard fixtures and outlets

Heating - Forced hot air

Insulation - Included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 6"-8" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-4

BASEMENT FINISH SPECIFICATIONS

Floor - Fair carpet

Interior - Furring; vapor barrier; fair gypsum board, taped and painted; frame interior partitions

Ceiling - Fair gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area.

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Fair Carpet

Interior - Frame Interior Construction; fair gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-4

GARAGE SPECIFICATIONS

Foundation - Concrete foundation

Floors - Reinforced slab

Roof - 2" x 4" rafters; usually gable roof; asphalt shingles or built-up

Exterior - Frame; block or brick; average stucco or siding

Interior - Unfinished - No gypsum board, taped and painted or wallboard; fair overhead and pedestrian doors; fair windows

- Finished - Gypsum board, taped and painted or wallboard; fair overhead and pedestrian doors; fair windows

Electrical - Lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 6" - 8" Reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board, taped and painted; floor drain

- Finished - Fire proofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

GRADE 1F-4

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

- Finished - Frame; drywall or plywood finish and minimum partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

POOLS SPECIFICATION

Base includes pool type, filter, light, maximum depth of 8-9 ft., heater, cold area location; judged to be same quality as residence

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence

GRADE 1F-4 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	39.50	38.85	31.91	31.60	31.08	25.53	36.34	35.74	29.36	11.60	9.90
200	35.98	35.38	29.73	28.78	28.30	23.78	33.10	32.55	27.35	9.80	8.95
300	34.07	33.51	28.52	27.26	26.81	22.82	31.34	30.83	26.24	8.88	8.52
400	32.78	32.23	27.70	26.22	25.78	22.16	30.16	29.65	25.48	8.27	8.28
500	31.80	31.27	27.09	25.44	25.02	21.67	29.26	28.77	24.92	7.83	8.11
600	31.02	30.50	26.57	24.82	24.40	21.26	28.54	28.06	24.44	7.49	7.98
700	30.38	29.88	26.19	24.30	23.90	20.95	27.95	27.49	24.09	7.21	7.89
800	29.83	29.34	25.80	23.86	23.47	20.64	27.44	26.99	23.74	6.98	7.80
900	29.37	28.88	25.50	23.50	23.10	20.40	27.02	26.57	23.46	6.79	7.74
1000	28.94	28.46	25.21	23.15	22.77	20.17	26.62	26.18	23.19	6.61	7.68
1100	28.59	28.12	24.98	22.87	22.50	19.98	26.30	25.87	22.98	6.47	7.64
1200	28.25	27.78	24.75	22.60	22.22	19.80	25.99	25.56	22.77	6.33	7.60
1300	27.93	27.46	24.55	22.34	21.97	19.64	25.70	25.26	22.59	6.20	7.56
1400	27.64	27.18	24.37	22.11	21.74	19.50	25.43	25.01	22.42	6.09	7.52
1500	27.38	26.93	24.19	21.90	21.54	19.35	25.19	24.78	22.25	5.99	7.49
1600	27.15	26.70	24.03	21.72	21.36	19.22	24.98	24.56	22.11	5.90	7.47
1700	26.92	26.47	23.88	21.54	21.18	19.10	24.77	24.35	21.97	5.81	7.45
1800	26.72	26.27	23.73	21.38	21.02	18.98	24.58	24.17	21.83	5.73	7.43
1900	26.52	26.07	23.60	21.22	20.86	18.88	24.40	23.98	21.71	5.66	7.41
2000	26.34	25.90	23.47	21.07	20.72	18.78	24.23	23.83	21.59	5.60	7.38
2100	26.17	25.73	23.34	20.94	20.58	18.67	24.08	23.67	21.47	5.53	7.36
2200	26.00	25.56	23.24	20.80	20.45	18.59	23.92	23.52	21.38	5.46	7.35
2300	25.83	25.39	23.14	20.66	20.31	18.51	23.76	23.36	21.29	5.40	7.33
2400	25.68	25.25	23.03	20.54	20.20	18.42	23.63	23.23	21.19	5.34	7.32
2500	25.54	25.11	22.93	20.43	20.09	18.34	23.50	23.10	21.10	5.29	7.31
2600	25.39	24.97	22.83	20.31	19.98	18.26	23.36	22.97	21.00	5.24	7.30
2700	25.28	24.85	22.75	20.22	19.88	18.20	23.26	22.86	20.93	5.19	7.29

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ .93 /SQ. FT.	$ .64 /SQ. FT.	$ .28 /SQ. FT.
CLASS D VENEER	$ .84 /SQ. FT.	$ .56 /SQ. FT.	$ .25 /SQ. FT.
CLASS D	$ .77 /SQ. FT.	$ .49 /SQ. FT.	$ .23 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING
$ 2.21 PER SQ. FT.

SOLAR ENERGY
FORCED HOT AIR (DIRECT AIR) $28.75 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC
$ 4.37 PER SQ. FT.

GRADE 1F-4 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	16.68	16.32	12.23	16.68	16.32	12.23	5.46	4.06	$ 1,800	$ 589
200	12.88	12.61	9.46	12.88	12.61	9.46	4.17		$ 3,272	$ 687
300	11.44	11.18	8.56	11.44	11.18	8.56	3.60		$ 4,663	$ 785
400	9.98	9.74	7.67	9.98	9.74	7.67	3.25		$ 5,972	$ 900
500	9.51	9.27	7.43	9.51	9.27	7.43	3.02		$ 7,199	$1010
600	9.03	8.80	7.15	9.03	8.80	7.15	2.85		$ 8,426	$1121
700	8.77	8.54	7.01	8.77	8.54	7.01	2.72		$ 9,653	$1227
800	8.51	8.28	6.82	8.51	8.28	6.82	2.61		$10,799	$1330
900	8.46	7.94	6.77	8.46	7.94	6.77	2.52		$11,944	$1428
1000	8.41	7.86	6.73	8.41	7.86	6.73	2.44		$13,090	$1522
1100	8.33	7.77	6.68	8.33	7.77	6.68	2.38		$14,235	$1611
1200	8.22	7.68	6.63	8.22	7.68	6.63	2.32		$15,298	$1697
1300	8.13	7.59	6.59	8.13	7.59	6.59	2.27		$16,443	$1779
1400	8.03	7.50	6.54	8.03	7.50	6.54	2.23		$17,507	$1857

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$1069	$ 428
UPPER STORIES	$ 267	
PRE-FAB FIREPLC/STV	$ 712	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 61.03
CONCRETE	$122.05
GUNITE	$162.33
FIBERGLASS	$103.74

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$387
VACUUM CLEANER SYSTEM -3 OUTLETS	$720
INTERCOM, MASTER STATION	$218
-ADD PER OUTLET	$ 41
SAUNA	$890
FOLDING STAIRWAY	$144
GARAGE DOOR OPENER	$227
GARAGE HEAT	$.60/SQ.FT
INSULATION	$.30/SQ.FT

ATTACHED GARAGE

COMMON WALL DEDUCTION

$28.33	PER LINEAL FOOT (CLASS C)
$27.94	PER LINEAL FOOT (CLASS D VENEER)
$20.60	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 5.33 PER SQ. FT. (CEILING & FLOOR)	$ 5.50 PER SQ. FT. (CEILING & FLOOR)
$ .55 /SQ. FT. OF WALL AREA	$ .63 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 788	1 CAR	$ 575
2 CAR	$1048	2 CAR	$ 665

BUILT-INS

$246 PER BUILT-IN

PLUMBING

$286 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 4.50 PER SQ. FT.

CONCRETE

$ 1.43 PER SQ. FT.

PAVING

$ .85 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-5

QUALITY GRADE 1 F-5

QUALITY GRADE 1 F-5

QUALITY GRADE 1 F-5

QUALITY GRADE 1 F-5

GRADE 1F-5

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter and center walls

Floors - Hardwood; 1" sub-floor on 2" x 10" joists, 16" on center; average carpet; vinyl absestos tile

Roof - Medium pitch; good sheathing; 2" x 4" rafters; usually gable or hip; stucco; pumice block

Exterior - Wood frame; brick; wood sheathing; good siding or equivalent

Interior - Frame; plaster or drywall; good trim (hardwood, etc.)

Plumbing - Good quality fixtures, includes lavatories, toilets, bathtubs, kitchen sink, water heater, laundry facilities; One bath per three bedrooms included in base cost schedule

Electrical - Good fixtures and outlets

Heating - Forced hot air

Insulation - Included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-5

BASEMENT FINISH SPECIFICATIONS

Floor - Average carpet

Interior - Furring; vapor barrier; average gypsum board, taped and painted; frame interior partitions

Ceiling - Average gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Average carpet

Interior - Frame Interior Construction; average gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-5

GARAGE SPECIFICATIONS

Foundation - Concrete foundation

Floors - Reinforced slab

Roof - 2" x 4" rafters; usually hip or gable roof; good wood or composition shingles

*Exterior - Frame; brick; stucco or siding; sometimes brick trim

Interior - Unfinished - No gypsum board, taped and painted; overhead and pedestrian doors; windows

Finished - Gypsum board, taped and painted; overhead and pedestrian doors; windows

Electrical - Lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board, taped and painted; floor drain

- Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

Finished - Frame; drywall or plywood finish and minimum partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

POOLS SPECIFICATION

Base includes pool type, filter, light, maximum depth of 8-9 ft., heater, cold area location; judged to be same quality as residence

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence

GRADE 1F-5 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	45.92	44.78	37.06	36.74	35.82	29.65	42.25	41.20	34.10	11.60	10.83
200	41.85	40.81	34.54	33.48	32.65	27.63	38.50	37.55	31.78	9.80	9.81
300	39.65	38.66	33.15	31.72	30.93	26.52	36.48	35.57	30.50	8.88	9.36
400	38.15	37.19	32.20	30.52	29.75	25.76	35.10	34.21	29.62	8.27	9.09
500	37.01	36.08	31.49	29.61	28.86	25.19	34.05	33.19	28.97	7.83	8.91
600	36.11	35.21	30.90	28.89	28.17	24.72	33.22	32.39	28.43	7.49	8.77
700	35.38	34.49	30.46	28.30	27.59	24.37	32.55	31.73	28.02	7.21	8.66
800	34.74	33.87	30.01	27.79	27.10	24.01	31.96	31.16	27.61	6.98	8.58
900	34.21	33.35	29.66	27.37	26.68	23.73	31.47	30.68	27.29	6.79	8.51
1000	33.71	32.86	29.33	26.97	26.29	23.46	31.01	30.23	26.98	6.61	8.45
1100	33.31	32.47	29.07	26.65	25.98	23.26	30.65	29.87	26.74	6.47	8.40
1200	32.91	32.08	28.80	26.33	25.66	23.04	30.28	29.51	26.50	6.33	8.35
1300	32.54	31.72	28.56	26.03	25.38	22.85	29.94	29.18	26.28	6.20	8.32
1400	32.21	31.40	28.36	25.77	25.12	22.69	29.63	28.89	26.09	6.09	8.28
1500	31.91	31.10	28.15	25.53	24.88	22.52	29.36	28.61	25.90	5.99	8.25
1600	31.64	30.84	27.97	25.31	24.67	22.38	29.11	28.37	25.73	5.90	8.23
1700	31.37	30.58	27.79	25.10	24.46	22.23	28.86	28.13	25.57	5.81	8.19
1800	31.14	30.35	27.62	24.91	24.28	22.10	28.65	27.92	25.41	5.73	8.17
1900	30.91	30.13	27.47	24.73	24.10	21.98	28.44	27.72	25.27	5.66	8.15
2000	30.71	29.93	27.32	24.57	23.94	21.86	28.25	27.54	25.13	5.60	8.13
2100	30.51	29.74	27.17	24.41	23.79	21.74	28.07	27.36	25.00	5.53	8.11
2200	30.31	29.54	27.05	24.25	23.63	21.64	27.89	27.18	24.89	5.46	8.10
2300	30.11	29.34	26.93	24.09	23.47	21.54	27.70	26.99	24.78	5.40	8.08
2400	29.94	29.18	26.82	23.95	23.34	21.46	27.54	26.85	24.67	5.34	8.07
2500	29.77	29.02	26.70	23.82	23.22	21.36	27.39	26.70	24.56	5.29	8.05
2600	29.61	28.86	26.58	23.69	23.09	21.26	27.24	26.55	24.45	5.24	8.03
2700	29.47	28.73	26.49	23.58	22.98	21.19	27.11	26.43	24.37	5.19	8.02

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ 1.03 /SQ. FT.	$ .71 /SQ. FT.	$ .31 /SQ. FT.
CLASS D VENEER	$ .93 /SQ. FT.	$ .62 /SQ. FT.	$ .28 /SQ. FT.
CLASS D	$ .85 /SQ. FT.	$ .54 /SQ. FT.	$ .26 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $35.41 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 4.80 PER SQ. FT.

GRADE 1F-5 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	21.96	20.79	15.90	21.96	20.79	15.90	5.86	4.43	$ 2,070	$ 677
200	16.97	16.09	12.28	16.97	16.09	12.28	4.47		$ 3,763	$ 790
300	15.05	14.28	11.13	15.05	14.28	11.13	3.85		$ 5,363	$ 903
400	13.12	12.47	9.97	13.12	12.47	9.97	3.49		$ 6,868	$1035
500	12.45	11.85	9.60	12.45	11.85	9.60	3.24		$ 8,279	$1162
600	11.79	11.24	9.22	11.79	11.24	9.22	3.05		$ 9,690	$1289
700	11.45	10.91	9.03	11.45	10.91	9.03	2.91		$11,101	$1411
800	11.12	10.58	8.84	11.12	10.58	8.84	2.79		$12,419	$1529
900	10.96	10.56	8.80	10.96	10.56	8.80	2.70		$13,736	$1642
1000	10.87	10.54	8.75	10.87	10.54	8.75	2.62		$15,053	$1750
1100	10.74	10.42	8.70	10.74	10.42	8.70	2.55		$16,370	$1853
1200	10.60	10.29	8.66	10.60	10.29	8.66	2.49		$17,593	$1952
1300	10.47	10.17	8.58	10.47	10.17	8.58	2.43		$18,910	$2046
1400	10.37	10.07	8.51	10.37	10.07	8.51	2.39		$20,133	$2136

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$1236	$ 494
UPPER STORIES	$ 298	
PRE-FAB FIREPLC/STV	$ 800	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 62.21
CONCRETE	$124.42
GUNITE	$165.48
FIBERGLASS	$105.76

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$ 442
VACUUM CLEANER SYSTEM -3 OUTLETS	$ 823
INTERCOM, MASTER STATION	$ 249
-ADD PER OUTLET	$ 47
SAUNA	$ 976
FOLDING STAIRWAY	$ 160
DUMBWAITER	$7560
GARAGE DOOR OPENER	$ 239
SECURITY SYSTEM	$ 590
GARAGE HEAT	$ .60/SQ.FT
INSULATION	$ .30/SQ.FT

ATTACHED GARAGE

COMMON WALL DEDUCTION

$37.50	PER LINEAL FOOT (CLASS C)
$35.37	PER LINEAL FOOT (CLASS D VENEER)
$23.28	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 5.88 PER SQ. FT. (CEILING & FLOOR)	$ 6.10 PER SQ. FT. (CEILING & FLOOR)
$ .58 /SQ. FT. OF WALL AREA	$ .67 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 823	1 CAR	$ 600
2 CAR	$1094	2 CAR	$ 694

BUILT-INS

$282 PER BUILT-IN

PLUMBING

$309 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 5.00 PER SQ. FT.

CONCRETE

$ 1.56 PER SQ. FT.

PAVING

$ .88 PER SQ. FT.

ENCLOSED PORCH: 50% OF FIRST FLOOR BASE COST
OPEN PORCH: 30% OF FIRST FLOOR BASE COST
PATIO OR DECK: 20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-6

QUALITY GRADE 1 F-6

QUALITY GRADE 1 F-6

QUALITY GRADE 1 F-6

GRADE 1F-6

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter and center walls

Floors - Hardwood; 1" sub-floor on 2" x 10" joists, 16" on center; good carpet

Roof - Medium to high pitch; 3/4"-1" solid sheathing; heavy rafters; tile; good composition shingles

Exterior - Wood frame or good block; wood sheathing; good stucco or siding; common or used brick

Interior - Frame; good plaster, drywall, or paneling; hardwood trim & cabinets; adequate closets and storage.

Plumbing - Good quality fixtures, includes lavatories, toilets, bathtubs, kitchen sink, water heater, and laundry facilities; One bath per two bedrooms included in base cost schedule

Electrical - Good quality fixtures and outlets

Heating - Package air conditioning

Insulation - Included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-6

BASEMENT FINISH SPECIFICATIONS

Floor - Good carpet

Interior - Furring; vapor barrier; good gypsum board, taped and painted; frame interior partitions

Ceiling - Good gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area.

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Good carpet

Interior - Frame Interior Construction; good gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-6

GARAGE SPECIFICATIONS

Foundation - Concrete foundation

Floors - Reinforced slab

Roof - Good roof; shakes, tile, or good composition shingles

*Exterior - Frame; face brick; good stucco or siding

Interior - Unfinished - Gypsum board, taped and painted; good doors and windows

- Finished - No gypsum board, taped and painted; good doors and windows

Electrical - Good lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board, taped and painted; floor drain

- Finished - Fire proofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling, roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

- Finished - Frame; drywall or plywood finish and partitions

Electrical - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-6

POOLS SPECIFICATION

Base includes pool type, filter, light, maximum depth of 8-9 ft., heater, cold area location; judged to be same quality as residence

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence

08/85

GRADE 1F-6 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	59.53	55.90	46.67	47.62	44.72	37.34	54.77	51.43	42.94	11.60	11.96
200	54.17	50.84	43.43	43.34	40.67	34.74	49.84	46.77	39.96	9.80	10.86
300	51.26	48.10	41.63	41.01	38.48	33.30	47.16	44.25	38.30	8.88	10.37
400	49.28	46.24	40.41	39.42	36.99	32.33	45.34	42.54	37.18	8.27	10.08
500	47.78	44.83	39.50	38.22	35.86	31.60	43.96	41.24	36.34	7.83	9.89
600	46.59	43.71	38.73	37.27	34.97	30.98	42.86	40.21	35.63	7.49	9.74
700	45.63	42.80	38.16	36.50	34.24	30.53	41.98	39.38	35.11	7.21	9.62
800	44.79	42.01	37.59	35.83	33.61	30.07	41.21	38.65	34.58	6.98	9.53
900	44.09	41.35	37.13	35.27	33.08	29.70	40.56	38.04	34.16	6.79	9.45
1000	43.43	40.73	36.71	34.74	32.58	29.37	39.96	37.47	33.77	6.61	9.39
1100	42.90	40.23	36.37	34.32	32.18	29.10	39.47	37.01	33.46	6.47	9.33
1200	42.37	39.73	36.03	33.90	31.78	28.82	38.98	36.55	33.15	6.33	9.29
1300	41.89	39.28	35.72	33.51	31.42	28.58	38.54	36.14	32.86	6.20	9.25
1400	41.45	38.86	35.45	33.16	31.09	28.36	38.13	35.75	32.61	6.09	9.21
1500	41.05	38.49	35.19	32.84	30.79	28.15	37.77	35.41	32.37	5.99	9.17
1600	40.70	38.16	34.96	32.56	30.53	27.97	37.44	35.11	32.16	5.90	9.14
1700	40.35	37.82	34.73	32.28	30.26	27.78	37.12	34.79	31.95	5.81	9.11
1800	40.04	37.53	34.50	32.03	30.02	27.60	36.84	34.53	31.74	5.73	9.09
1900	39.73	37.24	34.31	31.78	29.79	27.45	36.55	34.26	31.57	5.66	9.07
2000	39.46	37.00	34.12	31.57	29.60	27.30	36.30	34.04	31.39	5.60	9.05
2100	39.20	36.75	33.93	31.36	29.40	27.14	36.06	33.81	31.22	5.53	9.03
2200	38.94	36.50	33.77	31.15	29.20	27.02	35.82	33.58	31.07	5.46	9.00
2300	38.67	36.25	33.62	30.94	29.00	26.90	35.58	33.35	30.93	5.40	8.98
2400	38.45	36.04	33.47	30.76	28.83	26.78	35.37	33.16	30.79	5.34	8.97
2500	38.23	35.84	33.32	30.58	28.67	26.66	35.17	32.97	30.65	5.29	8.95
2600	38.01	35.63	33.16	30.41	28.50	26.53	34.97	32.78	30.51	5.24	8.94
2700	37.84	35.46	33.05	30.27	28.37	26.44	34.81	32.62	30.41	5.19	8.93

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ 1.15 /SQ. FT.	$ .80 /SQ. FT.	$ .35 /SQ. FT.
CLASS D VENEER	$ 1.04 /SQ. FT.	$ .70 /SQ. FT.	$ .31 /SQ. FT.
CLASS D	$ .96 /SQ. FT.	$ .62 /SQ. FT.	$ .29 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $40.37 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 5.31 PER SQ. FT.

GRADE 1F-6 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	28.95	26.67	20.65	28.95	26.67	20.65	6.31	5.38	$ 2,670	$ 873
200	22.39	20.60	15.95	22.39	20.60	15.95	4.81		$ 4,854	$1019
300	19.80	18.28	14.47	19.80	18.28	14.47	4.15		$ 6,918	$1165
400	17.21	15.95	12.98	17.21	15.95	12.98	3.76		$ 8,860	$1335
500	16.33	15.18	12.47	16.33	15.18	12.47	3.49		$10,680	$1499
600	15.45	14.39	11.95	15.45	14.39	11.95	3.29		$12,500	$1663
700	15.02	14.00	11.71	15.02	14.00	11.71	3.13		$14,320	$1820
800	14.59	13.59	11.48	14.59	13.59	11.48	3.01		$16,021	$1972
900	14.36	13.39	11.31	14.36	13.39	11.31	2.91		$17,719	$2118
1000	14.26	13.28	11.21	14.26	13.28	11.21	2.82		$19,418	$2258
1100	14.10	13.13	11.09	14.10	13.13	11.09	2.74		$21,117	$2390
1200	13.92	12.96	10.95	13.92	12.96	10.95	2.68		$22,695	$2518
1300	13.75	12.80	10.82	13.75	12.80	10.82	2.62		$24,394	$2639
1400	13.60	12.67	10.72	13.60	12.67	10.72	2.57		$25,972	$2755

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$1450	$ 580
UPPER STORIES	$ 356	
PRE-FAB FIREPLC/STV	$ 888	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 63.39
CONCRETE	$126.78
GUNITE	$168.62
FIBERGLASS	$107.76

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$ 497
VACUUM CLEANER SYSTEM -3 OUTLETS	$ 926
INTERCOM, MASTER STATION	$ 280
-ADD PER OUTLET	$ 53
SAUNA	$1061
FOLDING STAIRWAY	$ 203
DUMBWAITER	$8736
GARAGE DOOR OPENER	$ 252
SECURITY SYSTEM	$ 730
GARAGE HEAT	$ .60/SQ.FT
INSULATION	$ .30/SQ.FT

ATTACHED GARAGE

COMMON WALL DEDUCTION

$49.62	PER LINEAL FOOT (CLASS C)
$44.74	PER LINEAL FOOT (CLASS D VENEER)
$30.11	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 6.56 PER SQ. FT. (CEILING & FLOOR)	$ 6.84 PER SQ. FT. (CEILING & FLOOR)
$ .61 /SQ. FT. OF WALL AREA	$ .71 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 858	1 CAR	$ 626
2 CAR	$1141	2 CAR	$ 724

BUILT-INS

$318 PER BUILT-IN

PLUMBING

$336 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 5.50 PER SQ. FT.

CONCRETE

$ 1.68 PER SQ. FT.

PAVING

$ .91 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-7

QUALITY GRADE 1 F-7

QUALITY GRADE 1 F-7

GRADE 1F-7

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter and center walls

Floors - Hardwood; 1" sub-floor on 2" x 10" joists, 16" on center; very good carpet

Roof - Hip, gable, or flat; laminated beams; T & G deck; 1" solid sheathing; heavy rafters; shakes; slate; tile

Exterior - Wood frame or good brick; best stucco; wood sheathing; cedar or its equivalent siding; brick or stone veneer; common or used brick

Interior - Frame; expertly finished plaster or drywall; hardwood paneling; trim and cabinets; closets; ample storage and other extras

Plumbing - High quality fixtures, includes lavatories, toilets, bathtubs, kitchen sink, water heater, and laundry facilities; One bath per bedroom included in base

Electrical - High quality fixtures; special outlets

Heating - Warm and cool air

Insulation - Included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-7

BASEMENT FINISH SPECIFICATIONS

Floor - Very good carpet

Interior - Furring; vapor barrier; very good gypsum board, taped and painted; frame interior partitions

Ceiling - Very good gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Very good carpet

Interior - Frame Interior Construction; very good gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-7

GARAGE SPECIFICATIONS

Foundation - Concrete foundation

Floors - Reinforced slab

Roof - Heavy roof structure; shakes, tile, or good shingles

*Exterior - Frame or brick; best stucco or siding; stone or brick trim

Interior - Unfinished - No gypsum board, taped and painted, very good doors and windows

- Finished - Gypsum board, taped and painted; very good doors and windows

Electrical - Good lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 8" reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board, taped and painted; floor drain

- Finished - Fire proofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

Finished - Frame; drywall or plywood finish and partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-7

POOLS SPECIFICATION

Base includes pool type, filter, light, maximum depth of 8-9 ft., heater, cold area location; judged to be same quality as residence

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence

GRADE 1F-7 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	69.77	65.79	54.09	55.82	52.63	43.27	64.19	60.53	49.76	11.60	13.11
200	64.39	60.70	51.01	51.51	48.56	40.81	59.24	55.84	46.93	9.80	11.92
300	61.41	57.88	49.33	49.13	46.30	39.46	56.50	53.25	45.38	8.88	11.40
400	59.37	55.96	48.16	47.50	44.77	38.53	54.62	51.48	44.31	8.27	11.09
500	57.86	54.52	47.25	46.29	43.62	37.80	53.23	50.16	43.47	7.83	10.88
600	56.66	53.39	46.53	45.33	42.71	37.22	52.13	49.12	42.81	7.49	10.72
700	55.67	52.45	45.94	44.54	41.96	36.75	51.22	48.25	42.26	7.21	10.60
800	54.78	51.61	45.40	43.82	41.29	36.32	50.40	47.48	41.77	6.98	10.50
900	54.05	50.92	44.94	43.24	40.74	35.95	49.73	46.85	41.34	6.79	10.42
1000	53.37	50.27	44.54	42.70	40.22	35.63	49.10	46.25	40.98	6.61	10.35
1100	52.74	49.68	44.17	42.19	39.74	35.34	48.52	45.71	40.64	6.47	10.29
1200	52.22	49.19	43.86	41.78	39.35	35.09	48.04	45.25	40.35	6.33	10.24
1300	51.75	48.74	43.59	41.40	38.99	34.87	47.61	44.84	40.10	6.20	10.20
1400	51.28	48.30	43.31	41.02	38.64	34.65	47.18	44.44	39.85	6.09	10.16
1500	50.86	47.90	43.04	40.69	38.32	34.43	46.79	44.07	39.60	5.99	10.11
1600	50.49	47.56	42.82	40.39	38.05	34.26	46.45	43.76	39.39	5.90	10.08
1700	50.13	47.21	42.59	40.10	37.77	34.07	46.12	43.43	39.18	5.81	10.06
1800	49.81	46.92	42.36	39.85	37.54	33.89	45.83	43.17	38.97	5.73	10.03
1900	49.50	46.62	42.18	39.60	37.30	33.74	45.54	42.89	38.81	5.66	10.01
2000	49.19	46.32	42.00	39.35	37.06	33.60	45.25	42.61	38.64	5.60	9.97
2100	48.87	46.03	41.82	39.10	36.82	33.46	44.96	42.35	38.47	5.53	9.95
2200	48.61	45.78	41.64	38.89	36.62	33.31	44.72	42.12	38.31	5.46	9.94
2300	48.35	45.53	41.50	38.68	36.42	33.20	44.48	41.89	38.18	5.40	9.92
2400	48.14	45.33	41.37	38.51	36.26	33.10	44.29	41.70	38.06	5.34	9.90
2500	47.93	45.14	41.23	38.34	36.11	32.98	44.10	41.53	37.93	5.29	9.89
2600	47.73	44.94	41.10	38.18	35.95	32.88	43.91	41.34	37.81	5.24	9.87
2700	47.52	44.74	40.96	38.02	35.79	32.77	43.72	41.16	37.68	5.19	9.86

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ 1.26 /SQ. FT.	$ .88 /SQ. FT.	$ .38 /SQ. FT.
CLASS D VENEER	$ 1.15 /SQ. FT.	$ .79 /SQ. FT.	$ .35 /SQ. FT.
CLASS D	$ 1.08 /SQ. FT.	$ .71 /SQ. FT.	$ .32 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $56.84 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 5.85 PER SQ. FT.

GRADE 1F-7 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	36.84	33.77	27.14	36.84	33.77	27.14	6.69	6.01	$ 3,178	$1039
200	28.47	26.11	20.98	28.47	26.11	20.98	5.11		$ 5,777	$1213
300	25.17	23.22	19.03	25.17	23.22	19.03	4.41		$ 8,233	$1386
400	21.86	20.32	17.08	21.86	20.32	17.08	3.99		$10,543	$1589
500	20.75	19.33	16.35	20.75	19.33	16.35	3.70		$12,709	$1784
600	19.63	18.35	15.62	19.63	18.35	15.62	3.49		$14,875	$1979
700	19.11	17.83	15.32	19.11	17.83	15.32	3.33		$17,041	$2166
800	18.96	17.31	15.01	18.96	17.31	15.01	3.19		$19,064	$2347
900	18.68	17.05	14.78	18.68	17.05	14.78	3.08		$21,086	$2521
1000	18.53	16.92	14.66	18.53	16.92	14.66	2.99		$23,108	$2686
1100	18.33	16.73	14.50	18.33	16.73	14.50	2.91		$23,130	$2845
1200	18.09	16.51	14.31	18.09	16.51	14.31	2.84		$27,007	$2997
1300	17.87	16.31	14.14	17.87	16.31	14.14	2.78		$29,029	$3141
1400	17.69	16.15	14.00	17.69	16.15	14.00	2.73		$30,906	$3279

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$1664	$ 666
UPPER STORIES	$ 416	
PRE-FAB FIREPLC/STV	$ 976	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 64.57
CONCRETE	$129.14
GUNITE	$171.76
FIBERGLASS	$109.77

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$ 553
VACUUM CLEANER SYSTEM -3 OUTLETS	$1029
INTERCOM, MASTER STATION	$ 311
-ADD PER OUTLET	$ 59
SAUNA	$1146
FOLDING STAIRWAY	$ 229
DUMBWAITER	$9913
GARAGE DOOR OPENER	$ 265
SECURITY SYSTEM	$ 868
GARAGE HEAT	$ .60/SQ.FT.
INSULATION	$ .30/SQ.FT.

ATTACHED GARAGE

COMMON WALL DEDUCTION

$62.74	PER LINEAL FOOT (CLASS C)
$56.45	PER LINEAL FOOT (CLASS D VENEER)
$40.45	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 7.26 PER SQ. FT. (CEILING & FLOOR)	$ 7.61 PER SQ. FT. (CEILING & FLOOR)
$ .65 /SQ. FT. OF WALL AREA	$ .75 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 893	1 CAR	$ 651
2 CAR	$1187	2 CAR	$ 753

BUILT-INS

$354 PER BUILT-IN

PLUMBING

$362 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 6.00 PER SQ. FT.

CONCRETE

$ 1.80 PER SQ. FT.

PAVING

$ .93 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

QUALITY GRADE 1 F-8

GRADE 1F-8

RESIDENTIAL BUILDING SPECIFICATIONS

Foundation - 10" reinforced concrete perimeter and center walls

Floors - Hardwood; 1" sub-floor on 2" x 12" joists, 16" on center; excellent carpet

Roof - Medium to steep pitch; 1" solid sheathing; heavy rafters; shakes; slate; tile

Exterior - Wood frame or best brick; wood sheathing; good siding; brick or stone veneer

Interior - Frame; best plaster or hardwood paneling; ornamental trim; cabinets; closets; ample storage and other extras

Plumbing - Excellent quality fixtures, includes lavatories, toilets, bathtubs, kitchen sink, water heater, and laundry facilities; More than one bath per bedroom included in base cost schedule

Electrical - Excellent quality fixtures and many special outlets

Heating - Warm and cool air

Insulation - Included in base cost schedule

Built-ins - None included in base cost schedule

BASEMENT SPECIFICATIONS

Foundation - 10" reinforced concrete perimeter

Floor - Concrete on ground

Exterior - Concrete or block walls; water-proofed

Interior - Unfinished; floor drain; open stairs

Electrical - Minimum

Heating - None included in base cost schedule

GRADE 1F-8

BASEMENT FINISH SPECIFICATIONS

Floor - Excellent carpet

Interior - Furring; vapor barrier; excellent gypsum board, taped and painted; frame interior partitions

Ceiling - Excellent gypsum board, taped and painted

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule; if heat desired, basement finish area must be included in total heated area

UNFINISHED FLOOR AREA

(Value Deduction of the Following Components)

Floor - Excellent carpet

Interior - Frame Interior Construction; excellent gypsum board, taped and painted (walls and ceiling)

Electrical - Same value per sq. ft. as residence

Heating - Same value per sq. ft. as residence

SOLAR ENERGY SPECIFICATIONS

Base includes cost of collectors, storage tank, pipe loops, heat exchangers, ducts and controls, tank and pipe insulation; judged to be same quality as residence.

GRADE 1F-8

GARAGE SPECIFICATIONS

Foundation - Concrete foundation

Floors - Heavy slab

Roof - Heavy rafters or steep roof; shakes, tile, slate, or excellent shingles

*Exterior - Frame or brick; best stucco or siding; stone or brick trim

Interior - Unfinished - No gypsum board taped and painted; excellent doors and windows

- Finished - Gypsum board, taped and painted; excellent doors and windows

Electrical - Good lighting

Heating - None included in base cost schedule

*Deduct common wall cost if attached garage

BASEMENT GARAGE SPECIFICATIONS

Foundation - 10" reinforced concrete perimeter; base cost included in basement specifications

Floor - Concrete on ground; base cost included in basement specifications

Exterior - Concrete or block walls; water-proofed; base cost included in basement specifications

Interior - Unfinished - No gypsum board, taped and painted, floor drain

- Finished - Fire proofed wall and ceiling

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum

Heating - None included in base cost schedule

ENCLOSED PORCH SPECIFICATIONS

Raised floor; interior finish; ceiling; roof like residence

OPEN PORCH SPECIFICATIONS

Raised floor; unceiled

CARPORT OR PATIO

Slab on ground; unceiled; roof

ACCESSORY BUILDING

Foundation - Mud sill or minimal concrete

Floors - Wood joists; tongue and groove flooring

Roof - Solid one inch sheathing; composition roll

Exterior - Light wood studs; box frame; board and batten or inexpensive siding

Interior - Unfinished - Exposed studs on interior

- Finished - Frame; drywall or plywood finish and partitions

Electrical - Unfinished - None included in base cost schedule

- Finished - Minimum service and outlets

Plumbing - None included in base cost schedule

Heating - None included in base cost schedule

GRADE 1F-8

POOLS SPECIFICATION

Base includes pool type, filter, light, maximum depth of 8-9 ft., heater, cold area location; judged to be same quality as residence

PAVING SPECIFICATION

Base includes 2" asphalt on 2" base; judged to be same quality as residence

CONCRETE SPECIFICATION

Base includes 3½" - 4" concrete, mesh reinforcing; judged to be same quality as residence.

GRADE 1F-8 SCHEDULE

AREA IN SQ. FT.	1ST STORY CLASS C	1ST STORY CLASS D VENEER	1ST STORY CLASS D	1/2 STORY (80% 1ST STORY) CLASS C	1/2 STORY (80% 1ST STORY) CLASS D VENEER	1/2 STORY (80% 1ST STORY) CLASS D	UPPER STORY (92% 1ST STORY) CLASS C	UPPER STORY (92% 1ST STORY) CLASS D VENEER	UPPER STORY (92% 1ST STORY) CLASS D	BASEMENT	BASEMENT FINISHED
100	83.45	78.98	66.37	66.76	63.18	53.10	76.77	72.66	61.06	11.60	14.52
200	77.06	72.92	62.64	61.65	58.34	50.11	70.90	67.09	57.63	9.80	13.27
300	73.53	69.57	60.61	58.82	55.66	48.49	67.65	64.00	55.76	8.88	12.70
400	71.11	67.28	59.18	56.89	53.82	47.34	65.42	61.90	54.45	8.27	12.36
500	69.32	65.57	58.08	55.46	52.46	46.46	63.77	60.32	53.43	7.83	12.14
600	67.89	64.22	57.20	54.31	51.38	45.76	62.46	59.08	52.62	7.49	11.97
700	66.71	63.11	56.49	53.37	50.49	45.19	61.37	58.06	51.97	7.21	11.84
800	65.66	62.11	55.83	52.53	49.69	44.66	60.41	57.14	51.36	6.98	11.73
900	64.79	61.28	55.28	51.83	49.02	44.22	59.61	56.38	50.86	6.79	11.64
1000	63.99	60.52	54.79	51.19	48.42	43.83	58.87	55.68	50.41	6.61	11.57
1100	63.24	59.81	54.35	50.59	47.85	43.48	58.18	55.03	50.00	6.47	11.50
1200	62.62	59.23	53.96	50.10	47.38	43.17	57.61	54.49	49.64	6.33	11.44
1300	62.07	58.70	53.63	49.66	46.96	42.90	57.10	54.00	49.34	6.20	11.40
1400	61.51	58.17	53.30	49.21	46.54	42.64	56.59	53.52	49.04	6.09	11.36
1500	61.01	57.70	52.98	48.81	46.16	42.38	56.13	53.08	48.74	5.99	11.32
1600	60.58	57.28	52.70	48.46	45.82	42.16	55.73	52.70	48.48	5.90	11.28
1700	60.14	56.87	52.43	48.11	45.50	41.94	55.33	52.32	48.24	5.81	11.25
1800	59.77	56.52	52.15	47.82	45.22	41.72	54.99	52.00	47.98	5.73	11.22
1900	59.40	56.17	51.93	47.52	44.94	41.54	54.65	51.68	47.78	5.66	11.19
2000	59.03	55.82	51.71	47.22	44.66	41.37	54.31	51.35	47.57	5.60	11.17
2100	58.66	55.46	51.49	46.93	44.37	41.19	53.97	51.02	47.37	5.53	11.15
2200	58.35	55.17	51.27	46.68	44.14	41.02	53.68	50.76	47.17	5.46	11.12
2300	58.04	54.87	51.11	46.43	43.90	40.89	53.40	50.48	47.02	5.40	11.10
2400	57.79	54.64	50.94	46.23	43.71	40.75	53.17	50.27	46.86	5.34	11.08
2500	57.54	54.40	50.78	46.03	43.52	40.62	52.94	50.05	46.72	5.29	11.06
2600	57.29	54.17	50.61	45.83	43.34	40.49	52.71	49.84	46.56	5.24	11.05
2700	57.05	53.93	50.45	45.64	43.14	40.36	52.49	49.62	46.41	5.19	11.03

HEATING AND COOLING

TYPE	MONT CLIMATE (ADD)
FLOOR/WALL	$ .94
HOT WATER	$4.23
STEAM	$3.76
GRAV HOT AIR	$1.88
FORCE HOT AIR	$2.02
RAD/HEAT PUMP	$4.70
ELEC BB	$2.07
PACKAGE A/C	$4.23
HOT&COOL AIR	$5.22

FOUNDATION

	MUD SILL	POST & PIER	CONCRETE SLAB
CLASS C	$ 1.37 /SQ. FT.	$ .96 /SQ. FT.	$ .41 /SQ. FT.
CLASS D VENEER	$ 1.28 /SQ. FT.	$ .88 /SQ. FT.	$ .38 /SQ. FT.
CLASS D	$ 1.20 /SQ. FT.	$ .81 /SQ. FT.	$ .36 /SQ. FT.

(DEDUCTION FROM BASE)

CENTRAL AIR COOLING

$ 2.21 PER SQ. FT.

SOLAR ENERGY

FORCED HOT AIR (DIRECT AIR) $61.96 /SQ. FT. OF COLLECTOR AREA

FINISHED ATTIC

$ 6.54 PER SQ. FT.

GRADE 1F-8 SCHEDULE

AREA IN SQ. FT.	ATTACHED GARAGE CLS C	ATTACHED GARAGE CLS D VENEER	ATTACHED GARAGE CLS D	DETACHED GARAGE UNFINISHED CLS C	DETACHED GARAGE UNFINISHED CLS D VENEER	DETACHED GARAGE UNFINISHED CLS D	DETACHED GARAGE FINISHED	CARPORT	ACCESSORY BUILDING UNFINISHED TOTAL COST	ACCESSORY BUILDING FINISHED FLAT ADD
100	42.16	38.90	31.66	42.16	38.90	31.66	7.22	6.71	$ 3,845	$1258
200	32.61	30.06	24.46	32.61	30.06	24.46	5.51		$ 6,990	$1467
300	28.80	26.65	22.09	28.80	26.65	22.09	4.75		$ 9,962	$1677
400	25.00	23.24	19.71	25.00	23.24	19.71	4.30		$12,757	$1922
500	23.70	22.09	18.82	23.70	22.09	18.82	3.99		$15,378	$2158
600	22.39	20.93	17.92	22.39	20.93	17.92	3.76		$17,999	$2394
700	21.80	20.35	17.57	21.80	20.35	17.57	3.59		$20,620	$2621
800	21.20	19.76	17.22	21.20	19.76	17.22	3.45		$23,068	$2840
900	20.88	19.47	16.96	20.88	19.47	16.96	3.33		$25,514	$3050
1000	20.71	19.31	16.83	20.71	19.31	16.83	3.23		$27,961	$3251
1100	20.49	19.09	16.64	20.49	19.09	16.64	3.14		$30,407	$3442
1200	20.22	18.84	16.43	20.22	18.84	16.43	3.07		$32,678	$3626
1300	19.97	18.62	16.23	19.97	18.62	16.23	3.00		$35,125	$3800
1400	19.77	18.43	16.07	19.77	18.43	16.07	2.94		$37,396	$3968

FIREPLACES

TYPE	ONE OPENING	ADDITIONAL OPENINGS
ONE STORY	$1972	$ 789
UPPER STORIES	$ 493	
PRE-FAB FIREPLC/STV	$1064	

POOLS

TYPE	$ PER LINEAL FOOT OF PERIMETER
PLASTIC	$ 65.76
CONCRETE	$131.51
GUNITE	$174.91
FIBERGLASS	$111.78

FLAT ADDS

(ADDITIONS OR SUBTRACTIONS)

ELEC. RANGE-OVEN COMB.	$ 608
VACUUM CLEANER SYSTEM -3 OUTLETS	$ 1132
INTERCOM, MASTER STATION	$ 342
-ADD PER OUTLET	$ 65
SAUNA	$ 1233
FOLDING STAIRWAY	$ 256
DUMBWAITER	$11088
GARAGE DOOR OPENER	$ 277
SECURITY SYSTEM	$ 1008
GARAGE HEAT	$ .60/SQ.FT.
INSULATION	$ .30/SQ.FT.

ATTACHED GARAGE

COMMON WALL DEDUCTION

$72.25	PER LINEAL FOOT (CLASS C)
$66.04	PER LINEAL FOOT (CLASS D VENEER)
$48.69	PER LINEAL FOOT (CLASS D)

UNFINISHED FLOOR AREA

1/2 STORY	FULL STORY
$ 8.16 PER SQ. FT. (CEILING & FLOOR)	$ 8.59 PER SQ. FT. (CEILING & FLOOR)
$ .69 /SQ. FT. OF WALL AREA	$ .79 /SQ. FT. OF WALL AREA

BASEMENT GARAGE

UNFINISHED		FINISHED	
1 CAR	$ 928	1 CAR	$ 677
2 CAR	$1234	2 CAR	$ 783

BUILT-INS

$390 PER BUILT-IN

PLUMBING

$394 PER FIXTURE (AS ADDITION OR DEDUCTION FROM BASE)

SHEDS

$ 6.50 PER SQ. FT.

CONCRETE

$ 1.93 PER SQ. FT.

PAVING

$ .96 PER SQ. FT.

ENCLOSED PORCH:	50% OF FIRST FLOOR BASE COST
OPEN PORCH:	30% OF FIRST FLOOR BASE COST
PATIO OR DECK:	20% OF FIRST FLOOR BASE COST

RESIDENTIAL-COMMERCIAL BUREAU

GUIDE FOR MOBILE HOME CLASSIFICATION

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
ABC	ALL YEARS	LOW COST
ACADEMY	1974 & BELOW	LOW COST
ACCENT	ALL YEARS	AVERAGE
ADRAIN	ALL YEARS	AVERAGE
AIRELINE	1970 & BELOW	LOW COST
ALMA	ALL YEARS	LOW COST
ALTA	ALL YEARS	AVERAGE
AMERICAN	ALL YEARS	LOW COST
AMERICAN COACH	ALL YEARS	LOW COST
ANDER	ALL YEARS	LOW COST
ANDERSON	ALL YEARS	LOW COST
ANGEL	ALL YEARS	LOW COST
ANGELES	ALL YEARS	LOW COST
APACHE	ALL YEARS	LOW COST
ARGUS	ALL YEARS	LOW COST
ARISTOCRAT	ALL YEARS	AVERAGE
ARMOR	ALL YEARS	AVERAGE
ASTRO	ALL YEARS	AVERAGE
ATLANTIC	1971 & BELOW	LOW COST
BARRINGTON	1971 & BELOW	LOW COST
	1972 - 1973	AVERAGE - Except LOW COST on double wides
	1974 - 1977	GOOD
	1978 & ABOVE	EXCELLENT
BAINBRIDGE	1975 & BELOW	AVERAGE -Except singles & LOW COST on doubles
	1976 & ABOVE	GOOD
BAYCREST	1976 & BELOW	LOW COST
BELLAVISTA	ALL YEARS	AVERAGE
BELMONT	ALL YEARS	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
BENDIX KING	ALL YEARS	AVERAGE
BENDIX KOZY	ALL YEARS	GOOD
BIG SKY	1973 & BELOW	AVERAGE
	1974 & ABOVE	GOOD
BILTMORE	ALL YEARS	LOW COST
BLAIRHOUSE	1976 & BELOW	AVERAGE
	1977 & ABOVE	GOOD
BOISE CASCASE	1971 & BELOW	LOW COST
	1972 & ABOVE	AVERAGE
	1978 & ABOVE - 24 WIDES	GOOD
BOLES AERO	ALL YEARS	LOW COST
BONNAVILLA	1971 & BELOW	LOW COST
	1972 - 1978	AVERAGE
	1979 - 14' and 16' wides	GOOD
BON PRIX	ALL YEARS	AVERAGE
BRIGHTON	ALL YEARS	AVERAGE
BRIGHTON MANOR	ALL YEARS	EXCELLENT
BROADMORE	1969 & BELOW	LOW COST
	1970 - 1975	AVERAGE
	1976	GOOD
BROOKDALE	1971 & BELOW	AVERAGE
	1972 - 1976	GOOD
BROOKWOOD-BENDIX-CUSTOM	ALL YEARS	GOOD
BUCKINGHAM	ALL YEARS	LOW COST
BUDDY	1971 & BELOW	LOW COST
	1972-1976	AVERAGE
	1977 - PRESENT	GOOD
BUDGER	ALL YEARS	LOW COST
CAMELOT	1972 & BELOW	LOW COST
	1973 & ABOVE	GOOD-except double wides are AVERAGE till 197
	1977 - PRESENT	GOOD

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
CASCADE	ALL YEARS	GOOD
CEDAR CHALET	ALL YEARS	LOW COST
CENTENNIAL	1975 & BELOW	AVERAGE
	1976 & ABOVE	GOOD
CENTRAL	1973 & BELOW	LOW COST
	1974 - 1976	AVERAGE
	1977 & ABOVE	GOOD
CENTURY	1969 & BELOW	AVERAGE
	1970 & ABOVE	GOOD
CHAMPION	1974 & BELOW	LOW COST
	1975 - 1977	AVERAGE
	1978 & ABOVE	GOOD
CHICKASAW	1974 & BELOW	LOW COST
CHICKASHA	1976 & BELOW	LOW COST
	1977 - 1978	AVERAGE
	1979 & ABOVE	GOOD
CLARION	ALL YEARS	LOW COST
COLUMBIA	1971 & BELOW	LOW COST
	1972 & ABOVE	AVERAGE
COMMANDER	ALL YEARS	LOW COST
COMMODORE	ALL YEARS	GOOD
CONCHEMCO	ALL YEARS	GOOD
CONCORD	1977 & BELOW	LOW COST
	1978 & ABOVE	AVERAGE
CONTEMPORI	ALL YEARS	LOW COST
CONTINENTAL	1974 & BELOW	LOW COST
	1975 & ABOVE	GOOD
COUGAR	1970 & BELOW	LOW COST
COVINGTON	1970 & BELOW	LOW COST
CRANBROOK	ALL YEARS	AVERAGE
CREST	ALL YEARS	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
BENDIX KING	ALL YEARS	AVERAGE
BENDIX KOZY	ALL YEARS	GOOD
BIG SKY	1973 & BELOW	AVERAGE
	1974 & ABOVE	GOOD
BILTMORE	ALL YEARS	LOW COST
BLAIRHOUSE	1976 & BELOW	AVERAGE
	1977 & ABOVE	GOOD
BOISE CASCASE	1971 & BELOW	LOW COST
	1972 & ABOVE	AVERAGE
	1978 & ABOVE - 24 WIDES	GOOD
BOLES AERO	ALL YEARS	LOW COST
BONNAVILLA	1971 & BELOW	LOW COST
	1972 - 1978	AVERAGE
	1979 - 14' and 16' wides	GOOD
BON PRIX	ALL YEARS	AVERAGE
BRIGHTON	ALL YEARS	AVERAGE
BRIGHTON MANOR	ALL YEARS	EXCELLENT
BROADMORE	1969 & BELOW	LOW COST
	1970 - 1975	AVERAGE
	1976	GOOD
BROOKDALE	1971 & BELOW	AVERAGE
	1972 - 1976	GOOD
BROOKWOOD-BENDIX-CUSTOM	ALL YEARS	GOOD
BUCKINGHAM	ALL YEARS	LOW COST
BUDDY	1971 & BELOW	LOW COST
	1972-1976	AVERAGE
	1977 - PRESENT	GOOD
BUDGER	ALL YEARS	LOW COST
CAMELOT	1972 & BELOW	LOW COST
	1973 & ABOVE	GOOD-except double wides are AVERAGE till 197
	1977 - PRESENT	GOOD

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
CASCADE	ALL YEARS	GOOD
CEDAR CHALET	ALL YEARS	LOW COST
CENTENNIAL	1975 & BELOW	AVERAGE
	1976 & ABOVE	GOOD
CENTRAL	1973 & BELOW	LOW COST
	1974 - 1976	AVERAGE
	1977 & ABOVE	GOOD
CENTURY	1969 & BELOW	AVERAGE
	1970 & ABOVE	GOOD
CHAMPION	1974 & BELOW	LOW COST
	1975 - 1977	AVERAGE
	1978 & ABOVE	GOOD
CHICKASAW	1974 & BELOW	LOW COST
CHICKASHA	1976 & BELOW	LOW COST
	1977 - 1978	AVERAGE
	1979 & ABOVE	GOOD
CLARION	ALL YEARS	LOW COST
COLUMBIA	1971 & BELOW	LOW COST
	1972 & ABOVE	AVERAGE
COMMANDER	ALL YEARS	LOW COST
COMMODORE	ALL YEARS	GOOD
CONCHEMCO	ALL YEARS	GOOD
CONCORD	1977 & BELOW	LOW COST
	1978 & ABOVE	AVERAGE
CONTEMPORI	ALL YEARS	LOW COST
CONTINENTAL	1974 & BELOW	LOW COST
	1975 & ABOVE	GOOD
COUGAR	1970 & BELOW	LOW COST
COVINGTON	1970 & BELOW	LOW COST
CRANBROOK	ALL YEARS	AVERAGE
CREST	ALL YEARS	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
CUSTOM	ALL YEARS	LOW COST
DETROITER	1967 & BELOW	LOW COST
	1968 & ABOVE	AVERAGE
DIPLOMAT	1971 & BELOW	LOW COST
DONNABELLA	1965 & BELOW	LOW COST
DUKE	1970 & BELOW	LOW COST
ELCAR	1970 & BELOW	LOW COST
EMBASSY	1974 & BELOW	AVERAGE
FAIRVIEW	1974 & BELOW	LOW COST
	1975 & ABOVE	AVERAGE
FALCON	1972 & BELOW	AVERAGE
	1973 & ABOVE	GOOD
FLAMINGO	1959 & BELOW	LOW COST
	1960 & ABOVE	AVERAGE
FLEETWOOD	1974 & BELOW	LOW COST
	1975 - 1976	AVERAGE
	1977 - PRESENT	GOOD
FOUR SEASONS	1972 & BELOW	LOW COST
FRONTIER	1970 & BELOW	LOW COST
FUTURAMA	1974 & BELOW	LOW COST
GALLATIN	1974 & BELOW	LOW COST
	1975 & ABOVE	GOOD
	1980 & ABOVE ON 18 WIDE	EXCELLENT
GEER	1971 & BELOW	LOW COST
	1972 & ABOVE	GOOD
GENERAL	ALL YEARS	LOW COST
GENTRY	1970 & BELOW	LOW COST
	1971 & ABOVE	AVERAGE
GIBRALTOR	ALL YEARS	AVERAGE
GLENBROOK	1974 & BELOW	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
GLENDALE	ALL YEARS	LOW COST
GLENCASTLE	1973 & BELOW	LOW COST
GLENWOOD	1977 & BELOW	AVERAGE
	1978 & ABOVE	GOOD
GLIDER	ALL YEARS	LOW COST
GOLDEN STATE	ALL YEARS	GOOD
GOVERNOR	1974 & BELOW	LOW COST
	1975 - 1976	AVERAGE
	1977 & ABOVE	GOOD
GRANVILLE	1974 & BELOW	AVERAGE
GREAT LAKES	1969 & BELOW	LOW COST
	1970 - 1977	AVERAGE
	1978 & ABOVE	EXCELLENT
GREAT NORTHERN	ALL YEARS	EXCELLENT
GUERDON-STATLER	ALL YEARS	GOOD
HACIENDA	1972 & BELOW	LOW COST
HALLMARK	ALL YEARS	LOW COST
HART	ALL YEARS	LOW COST
HICKS	ALL YEARS	LOW COST
HILLCREST	1975 & BELOW	LOW COST
	1976 & ABOVE	GOOD
HOLLYPARK	1973 & ABOVE	GOOD
HOUSE OF HARMONY	1965 & BELOW	LOW COST
	1966 & ABOVE	AVERAGE
INVADER	1974 & BELOW	LOW COST
KENCRAFT	ALL YEARS	LOW COST
KENTWOOD	1972 & BELOW	LOW COST
KIRKWOOD	1969 & BELOW	LOW COST
	1970 & ABOVE	AVERAGE
KIT	1972 & BELOW	LOW COST
	1973 - 1976	AVERAGE
	1977 & ABOVE	GOOD

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
KROPF	ALL YEARS	LOW COST
LANCER	ALL YEARS	GOOD
LAVELLE	ALL YEARS	GOOD
LEISURE HOME	1966 & BELOW	LOW COST
	1967 & ABOVE	AVERAGE
LEXINGTON	1971 & BELOW	AVERAGE
LIBERTY	1975 & BELOW	LOW COST
	1976 & ABOVE	AVERAGE
LIGHTHOUSE	ALL YEARS	LOW COST
LONE STAR	ALL YEARS	LOW COST
MADISON	1973 & BELOW	AVERAGE
MAGNOLIA	1964 & BELOW	LOW COST
	1965 - 1974	AVERAGE
	1975 & ABOVE	GOOD
MAJESTIC	ALL YEARS	LOW COST
MARATHON	1965 & BELOW	LOW COST
MARK	ALL YEARS	GOOD
MARLETTE	1959 & BELOW	LOW COST
	1960 - 1974	AVERAGE
	1975 - 1977	GOOD
	1978 & ABOVE	EXCELLENT
MARSHFIELD	1963 & BELOW	LOW COST
	1964 & ABOVE	AVERAGE
MARS	ALL YEARS	LOW COST
MAYFLOWER	ALL YEARS	LOW COST
MEADOWBROOK	1975 & BELOW	LOW COST
	1976 & ABOVE	AVERAGE
MEDALLION	1972 & BELOW	LOW COST
	1973 - 1978	AVERAGE
	1979 & ABOVE	GOOD
MELODY HOME	ALL YEARS	AVERAGE

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
MIDWAY	ALL YEARS	LOW COST
MOBILE CRUISER	ALL YEARS	LOW COST
MOBILE VILLA	ALL YEARS	LOW COST
MODULINE	1973 & BELOW	LOW COST
	1974 & ABOVE	AVERAGE
MONARCH	ALL YEARS	LOW COST
MONOCO CRUISER	ALL YEARS	LOW COST
MONTANAN	1975 & BELOW	LOW COST
	1976 & ABOVE	GOOD
MONTEBELLO	1979 & BELOW	GOOD
MONTROSE	ALL YEARS	GOOD
NASHUA	1973 & BELOW	LOW COST
	1974	AVERAGE
	1975 & ABOVE	GOOD
NATIONAL	1969 & BELOW	LOW COST
	1970 & ABOVE	AVERAGE
NEW MOON	1969 & BELOW	LOW COST
	1970 & ABOVE	AVERAGE
NOMAD	ALL YEARS	LOW COST
NORTHERN	ALL YEARS	AVERAGE
NORTHERN STAR	1967 & BELOW	LOW COST
NORTHWESTERN	1970 & BELOW	LOW COST
OLYMPIA	1971 & BELOW	LOW COST
OLYMPIAN	1973 & BELOW	LOW COST
PACEMAKER	ALL YEARS	LOW COST
PACIFICA	1969 & BELOW	LOW COST
	1970 - 1975	AVERAGE
PALACE	ALL YEARS	LOW COST
PAN AMERICAN	ALL YEARS	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
PARAMOUNT	1977 & BELOW	GOOD
PARKWOOD	ALL YEARS	AVERAGE
PARLIMENT	ALL YEARS	AVERAGE
PATHFINDER	1970 & BELOW	LOW COST
PATRICIAN	1970 & BELOW	AVERAGE
PLATT	ALL YEARS	LOW COST
PLEASUREAMA	1972 & BELOW	AVERAGE
PONDEROSA	1973 & BELOW	AVERAGE
	1974 & ABOVE	GOOD
PONTIAC	ALL YEARS	LOW COST
REDMAN	1972 & BELOW	AVERAGE
REGAL	1974 & BELOW	AVERAGE
	1975 & ABOVE	GOOD
REX	1968 & BELOW	LOW COST
	1969 & ABOVE	AVERAGE
RICHARDSON	1960 & BELOW	LOW COST
	1961 & ABOVE	AVERAGE
RIDEAU	1974 & BELOW	AVERAGE
	1975 & ABOVE	GOOD
RIDGEWOOD	1973 & BELOW	LOW COST
RITZCRAFT	1971 & BELOW	LOW COST
	1972 & ABOVE	AVERAGE
ROADRUNNER	1970 & BELOW	LOW COST
	1971 & ABOVE	AVERAGE
ROD & REEL	ALL YEARS	LOW COST
ROLLOHOME	1959 & BELOW	LOW COST
	1960 - 1973	AVERAGE
	1974 & ABOVE	GOOD
ROYAL LANSER	1971 & BELOW	AVERAGE
	1972 & ABOVE	GOOD

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
ROYAL OAKS	ALL YEARS	EXCELLENT
RUSHMORE	1959 & BELOW	LOW COST
	1960 - 1969	AVERAGE
	1970 & ABOVE	GOOD
SAFEWAY	1970 & BELOW	LOW COST
SAHARA	1971 & BELOW	LOW COST
	1972 - 1977	AVERAGE
	1978 & ABOVE	GOOD
SANDPOINTE	ALL YEARS	GOOD
SAVE-ON	1973 & BELOW	LOW COST
SCHULTZ	1973 & BELOW	LOW COST
	1974 - 1976	AVERAGE
	1977 & ABOVE	EXCELLENT
SECURITY	1971 & BELOW	AVERAGE
SEQUOIA	1975 & BELOW	LOW COST
	1976 & ABOVE	AVERAGE - Except 28' wide is GOOD
SHANGRILA	1973 & BELOW	AVERAGE
SHAR-LO	ALL YEARS	AVERAGE
SHAR-VAL	1974 & BELOW	AVERAGE
SHELBY	1974 & BELOW	LOW COST
	1975 - 1976	AVERAGE
	1977	EXCELLENT
SHELTEREX	1977 & BELOW	AVERAGE
SIERRA	ALL YEARS	LOW COST
SILVERCREST	1974 & BELOW	AVERAGE
	1975 - 1977	GOOD
	1978	EXCELLENT
SILVERSTAR	ALL YEARS	LOW COST
SKYLINE	1972 & BELOW	LOW COST
	1973 - 1975	AVERAGE
	1976 & ABOVE	GOOD
SOONER	ALL YEARS	LOW COST
SOUTHWESTERN	ALL YEARS	LOW COST

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
SPACEMASTER	ALL YEARS	LOW COST
SPARTAN	ALL YEARS	LOW COST
STATLER	1978 & ABOVE	GOOD
STAR	1974 & BELOW	LOW COST
STARCRAFT	ALL YEARS	AVERAGE
STEWART	ALL YEARS	LOW COST
STEIGLER	1972 & BELOW	AVERAGE
SUNDANCER	ALL YEARS	GOOD
SUN VALLEY	ALL YEARS	AVERAGE
SUPERIOR	1971 & BELOW	LOW COST
TAMARACK	1976 & BELOW 1977 1978 & ABOVE	LOW COST AVERAGE GOOD
TAMARRON	ALL YEARS	GOOD
TITAN	1974 & BELOW 1975 & ABOVE	LOW COST AVERAGE
TOWN & COUNTY	1975 1976 & ABOVE	LOW COST GOOD
TOWNHOUSE	ALL YEARS	AVERAGE
TRAVELITE	ALL YEARS	LOW COST
TRAVELHOME	ALL YEARS	LOW COST
TRAVELIZE	ALL YEARS	LOW COST
TRAVELO	ALL YEARS	LOW COST
TWILIGHT	ALL YEARS	LOW COST
TWIN LAKES	1970 & BELOW	LOW COST
VAGABOND	ALL YEARS	LOW COST
VAN DYKE	1972 & BELOW 1973 - 1976 1977	LOW COST AVERAGE GOOD

MOBILE HOME NAME	YEAR(S) OF CONSTRUCTION	CLASSIFICATION
VANTAGE	1972 & ABOVE	GOOD
VENTURA	ALL YEARS	LOW COST
VERSAILLES	1979 & ABOVE	GOOD
VICTOR	ALL YEARS	LOW COST
VICTORIA	ALL YEARS	LOW COST
VIKING	ALL YEARS	LOW COST
WEDGEWOOD	ALL YEARS	LOW COST
WESTMINISTER	1973 - 1976	AVERAGE
WESTWOOD	ALL YEARS	LOW COST
WICKCRAFT	1972 & BELOW	AVERAGE
WINDSOR	1974 & BELOW 1975 & ABOVE	AVERAGE GOOD
WOLVERINE	ALL YEARS	LOW COST
ZIMMER	ALL YEARS	LOW COST

LOW COST MOBILE HOMES

LOW COST MOBILE HOMES

MOBILE HOME CLASS SPECIFICATIONS

"L" LOW COST - GRADE IF-2

The Low Cost mobile home is generally a structure built to minimum construction standards established by the industry and most states.

Exterior finish is prepainted or prefinished ".015 to .020" alumninum, usually with corrugated panels. Many have exposed fasteners. Walls are typically 3" thick, 7'6" high, with minimum fenestration including low cost windows and doors.

Heating and ducting are normally minimal with uninsulated straight line forced air ducts.

Interiors usually are printed hardboard or plywood with floors or linoleum and low quality carpet. Cabinetry and hardware are standard low quality units.

Plumbing which includes five low cost white fixtures and laundry service, is usually located along one side of the trailer with minimum runs. Kitchen ranges are inexpensive drop-in-type.

Appliances, drapes, and furniture are not included in the base cost schedule.

MOBILE HOME SCHEDULE
LOW COST

LENGTH	8	10	12	14	16	18	20	22	24	26	28
20	23.31	19.82	17.21	15.25			24.42	23.35	22.29	21.52	20.76
22	23.00	19.51	16.92	14.98			23.55	22.48	21.42	20.67	19.92
24	22.69	19.20	16.63	14.71			22.68	21.61	20.55	19.81	19.08
26	22.38	18.89	16.34	14.44			21.81	20.74	19.68	18.96	18.24
28	22.09	18.57	16.05	14.19			20.94	19.87	18.80	18.10	17.40
30	21.85	18.33	15.83	13.99			20.32	19.25	18.18	17.49	16.80
32	21.62	18.09	15.62	13.80			19.71	18.63	17.56	16.88	16.21
34	21.43	17.90	15.46	13.64			19.29	18.23	17.18	16.48	15.79
36	21.24	17.71	15.30	13.48	14.96	14.22	18.87	17.83	16.80	16.08	15.37
38	21.05	17.52	15.14	13.32	14.40	13.68	18.45	17.43	16.42	15.68	14.95
40	20.86	17.32	15.00	13.15	13.83	13.13	18.03	17.04	16.06	15.30	14.54
42	20.70	17.16	14.81	13.01	13.67	12.99	17.80	16.80	15.81	15.05	14.30
44	20.54	17.00	14.62	12.88	13.53	12.85	17.58	16.57	15.57	14.81	14.06
46	20.41	16.86	14.49	12.76	13.35	12.69	17.37	16.36	15.35	14.59	13.84
48	20.27	16.71	14.36	12.64	13.25	12.59	17.17	16.15	15.13	14.37	13.62
50	20.14	16.58	14.25	12.53	13.13	12.47	16.99	15.96	14.93	14.17	13.42
52	20.01	16.46	14.13	12.43	13.00	12.35	16.81	15.77	14.74	13.98	13.23
54	19.89	16.34	14.02	12.33	12.89	12.24	16.64	15.60	14.56	13.80	13.05
56	19.77	16.22	13.91	12.23	12.78	12.14	16.48	15.43	14.39	13.63	12.88
58	19.66	16.11	13.81	12.14	12.68	12.04	16.33	15.28	14.23	13.47	12.72
60	19.55	16.00	13.71	12.05	12.57	11.94	16.18	15.12	14.07	13.31	12.56
62	19.45	15.90	13.62	11.96	12.48	11.85	16.04	14.98	13.92	13.16	12.41
64	19.35	15.80	13.53	11.88	12.38	11.76	15.90	14.84	13.78	13.02	12.27
66	19.25	15.56	13.30	11.67	12.30	11.68	15.80	14.71	13.63	12.86	12.10
68	19.15	15.32	13.07	11.45	12.21	11.59	15.69	14.58	13.48	12.70	11.93
70	19.05	15.23	12.99	11.37	12.13	11.52	15.62	14.51	13.41	12.64	11.87
72	18.95	15.14	12.90	11.30	12.06	11.45	15.56	14.45	13.34	12.57	11.80
74		15.04	12.82	11.22	11.97	11.36	15.43	14.32	13.21	12.44	11.67
76		14.95	12.73	11.15	11.90	11.29					
78		14.86	12.65	11.07	11.81	11.21					
80		14.75	12.56	10.99	11.73	11.13					
81					11.69	11.10					
82			12.45	10.90	11.65	11.07					
84				10.85	11.57	11.00					

MOBILE HOME ADDITION SPECIFICATION

LOW COST

Foundation - Wood sills on masonry or stone piers

Floors - Single softwood over minimal joist; concrete on ground; cheap tile; no insulation

Roof - Shed type; 2" x 6" joists; cheap sheathing; roll roofing; no insulation

Exterior - Wood frame; minimal siding

Interior - Wall board walls & ceiling; one room

Plumbing - None in base; add from Section 63 Page 5*

Electrical - Minimum; substandard fixtures and outlets

Heating - None in base; Add from Section 12 Page 14*

Insulation - None in base; Add from Section 55 Page 5*

Built-Ins - None in Base; Add from Section 12 Page 11*

Area	Wood Floors	Concrete Floors
100	10.64	10.29
200	10.08	9.73
300	8.70	8.35
400	8.25	7.90
500	8.00	7.65
600	7.80	7.45
700	7.70	7.35
800	7.60	7.25

*Denotes a section from the 1982 Marshall Valuation Service Manual.

AVERAGE MOBILE HOMES

AVERAGE MOBILE HOMES

"A" AVERAGE - GRADE IF-3

The Average mobile home will have an exterior of prefinished aluminum with the fasteners generally hidden.

Walls are 3" to 4" thick, 7'6" to 8" high, with adequate fenestration and attractive entrance. Often, the exteriors will have a combination of two textures or two colors.

Interiors are medium quality plywood, with hardwood veneer. Resilient flooring is of conventional residential quality, as well as the carpeting. Cabinetry and hardware are average quality with self-closing cabinets.

Heating is forced air through insulated ducting with provision for air conditioning.

Plumbing consists of seven average quality white or colored fixtures and laundry service. The fixtures include any combination of lavatory, toilet, bathtub, shower, kitchen sink, and hot water heater, kitchen equipment is well above minimums.

Appliances, drapes, and furniture are not included in the base cost schedule.

MOBILE HOME SCHEDULE

AVERAGE

LENGTH	8	10	12	14	16	18	20	22	24	26	28
20	26.17	22.07	19.34	17.16			28.64	27.40	26.16	25.26	24.37
22	25.82	21.75	19.01	16.85			27.62	26.38	25.14	24.25	23.37
24	25.47	21.43	18.68	16.54			26.60	25.36	24.12	23.24	22.37
26	25.12	21.11	18.35	16.23			25.58	24.34	23.10	22.23	21.37
28	24.76	20.81	18.01	15.92			24.57	23.32	22.08	21.22	20.37
30	24.49	20.54	17.75	15.69			23.85	22.60	21.35	20.53	19.71
32	24.22	20.27	17.50	15.46			23.13	21.88	20.63	19.84	19.05
34	24.00	20.05	17.30	15.27			22.64	21.41	20.19	19.37	18.56
36	23.78	19.83	17.10	15.08	16.67	15.85	22.15	20.95	19.75	18.91	18.07
38	23.56	19.61	16.90	14.89	16.04	15.25	21.66	20.48	19.31	18.44	17.58
40	23.35	19.39	16.69	14.71	15.41	14.65	21.17	20.02	18.88	17.98	17.09
42	23.16	19.20	16.52	14.55	15.25	14.50	20.90	19.74	18.58	17.69	16.80
44	22.98	19.02	16.36	14.40	15.08	14.34	20.63	19.46	18.29	17.40	16.51
46	22.82	18.85	16.21	14.27	14.90	14.16	20.39	19.20	18.02	17.13	16.24
48	22.66	18.69	16.06	14.14	14.78	14.05	20.15	18.95	17.76	16.87	15.98
50	22.51	18.54	15.92	14.01	14.65	13.92	19.93	18.73	17.53	16.63	15.74
52	22.36	18.40	15.78	13.89	14.50	13.78	19.72	18.51	17.30	16.40	15.51
54	22.22	18.26	15.65	13.77	14.38	13.67	19.52	18.30	17.09	16.19	15.30
56	22.09	18.12	15.53	13.66	14.26	13.55	19.33	18.10	16.88	15.99	15.10
58	21.96	18.00	15.42	13.56	14.15	13.45	19.15	17.91	16.68	15.79	14.90
60	21.84	17.88	15.31	13.46	14.04	13.34	18.97	17.72	16.48	15.59	14.71
62	21.72	17.76	15.20	13.36	13.93	13.24	18.80	17.55	16.31	15.42	14.54
64	21.61	17.65	15.10	13.26	13.83	13.14	18.63	17.38	16.14	15.25	14.37
66	21.50	17.54	14.98	13.15	13.74	13.05	18.29	17.04	15.80	14.92	14.05
68	21.39	17.44	14.86	13.05	13.63	12.95	17.96	16.72	15.48	14.60	13.74
70	21.26	17.31	14.74	12.95	13.54	12.87	17.64	16.41	15.17	14.28	13.43
72	21.15	17.20	14.62	12.85	13.46	12.79	17.30	16.09	14.83	13.96	13.14
74		17.10	14.51	12.79	13.37	12.70	17.00	15.80	14.50	13.65	12.85
76		16.99	14.39	12.64	13.29	12.62					
78		16.89	14.28	12.54	13.19	12.53					
80		16.80	14.16	12.45	13.10	12.45					
81			14.11	12.41	13.06	12.41					
82			14.05	12.37	13.02	12.37					
84				12.29	12.93	12.30					

MOBILE HOME ADDITION SPECIFICATION

AVERAGE

Foundation - 6" concrete or concrete block; stone or block piers

Floors - Plywood sub-floors on 2' x 6" joists - 16" on center; vinyl tile or low cost carpet; no insulation

Roof - Low pitch; wood frame; sheathing; fair wood or comp. shingles; minimum insulation

Exterior - Wood frame; fair wood sheathing, minimum insulation

Interior - Frame; drywall or cheap paneling; usually one room.

Plumbing - None in base; add from Section 63 Page 6*

Electrical - Plain fixtures and outlets

Heating - None in base; add from Section 12 Page 14*

Insulation - Very minimum; low cost

Built-Ins - None in Base; add from Section 12 Page 11*

Area	Wood Floors	Concrete Floors
300	11.25	10.95
400	10.50	10.20
500	10.05	9.75
600	9.75	9.45
700	9.50	9.20
800	9.35	9.05
900	9.25	8.95
1000	9.15	8.85

* Denotes a section from the 1982 Marshall Valuation Service Manual.

GOOD MOBILE HOMES

GOOD MOBILE HOMES

"G" GOOD - GRADE IF-4

The Good quality mobile home will have an exterior finish of aluminum, plywood or hardborad sometimes using a combination of the two. The finish is often in various textures such as horizontal aluminum siding, board and batten, wood grain, etc. Tow bars are normally removable.

Walls are 4" thick and 8' high with excellent fenestration, sliding doors, shutters, etc.

Interior is of natural finished hardwood veneers, cabinets and hardware are of good quality, and there are many extra interior items.

Heating has insulated perimeter ducts prepared for air conditioning. Resilient flooring and carpenting are of good quality.

Kitchen equipment is good quality and may include dishwasher and garbage disposal.

Plumbing consists of eight good quality white or colored fixtures and laundry service. The fixtures include any combination of lavatory, toilet, kitchen sink, bathtub, shower, kitchen sink, and hot water heater.

Appliances, drapes and furniture are not included in the base cost schedule.

08/85

MOBILE HOME SCHEDULE
GOOD

LENGTH	8	10	12	14	16	18	20	22	24	26	28
20	29.53	25.16	21.89	19.45			34.60	33.12	31.63	30.57	29.50
22	29.10	24.72	21.49	19.06			33.36	31.88	30.40	29.36	28.31
24	28.67	24.28	21.09	18.67			32.12	30.64	29.17	28.15	27.12
26	28.24	23.84	20.69	18.28			30.88	29.40	27.94	26.94	25.93
28	27.80	23.39	20.28	17.90			29.64	28.16	26.71	25.73	24.74
30	27.49	23.07	19.99	17.64			28.40	26.92	25.48	24.52	23.55
32	27.18	22.76	19.70	17.38			27.16	25.70	24.25	23.32	22.39
34	26.93	22.51	19.46	17.17			26.59	25.16	23.73	22.77	21.82
36	26.68	22.26	19.22	16.96	17.68	16.81	26.02	24.61	23.21	22.23	21.25
38	26.43	22.01	18.98	16.75	17.47	16.62	25.45	24.07	22.69	21.68	20.68
40	26.19	21.75	18.76	16.53	17.26	16.42	24.88	23.53	22.18	21.14	20.11
42	26.08	21.54	18.56	16.35	17.08	16.25	24.55	23.19	21.83	20.79	19.76
44	25.77	21.33	18.36	16.18	16.90	16.07	24.23	22.85	21.48	20.44	19.41
46	25.59	21.14	18.19	16.02	16.69	15.86	23.94	22.55	21.16	20.12	19.09
48	25.40	20.95	18.02	15.87	16.56	15.75	23.65	22.25	20.85	19.81	18.78
50	25.23	20.79	17.87	15.73	16.41	15.60	23.40	21.99	20.58	19.54	18.50
52	25.06	20.62	17.71	15.58	16.25	15.45	23.14	21.73	20.31	19.27	18.22
54	24.91	20.47	17.57	15.46	16.12	15.33	22.91	21.49	20.06	19.02	17.98
56	24.75	20.32	17.42	15.33	15.98	15.20	22.67	21.24	19.81	18.77	17.73
58	24.61	20.18	17.30	15.21	15.86	15.08	22.46	21.02	19.58	18.54	17.50
60	24.46	20.03	17.17	15.09	15.73	14.96	22.24	20.79	19.34	18.31	17.27
62	24.33	19.90	17.05	14.98	15.62	14.85	22.04	20.59	19.14	18.11	17.07
64	24.20	19.77	16.93	14.87	15.50	14.73	21.84	20.39	18.93	17.90	16.86
66	24.07	19.65	16.82	14.77	15.40	14.64	21.66	20.20	18.74	17.71	16.67
68	23.95	19.53	16.71	14.67	15.28	14.53	21.48	20.02	18.55	17.52	16.48
70	23.83	19.38	16.58	14.56	15.19	14.44	21.30	19.84	18.36	17.33	16.29
72	23.70	19.26	16.48	14.47	15.10	14.35	21.12	19.65	18.17	17.15	16.10
74		19.13	16.37	14.37	14.98	14.31	20.95	19.50	18.00	16.95	15.90
76		19.00	16.26	14.28	14.90	14.16					
78		18.88	16.16	14.19	14.79	14.06					
80		18.75	16.05	14.09	14.69	13.96					
81				14.04	14.65	13.92					
82			14.95	13.99	14.61	13.88					
84				13.95	14.53	13.80					

MOBILE HOME ADDITION SPECIFICATION

GOOD

Foundation - 6" - 8" reinforced concrete

Floors - 3/4" to 1" subfloor on 2' x 8" joist, 16" on center; average carpet or tile; insulation

Roof - Medium pitch; 3/4" sheathing; asphalt shingles; insulation; usually covers addition and mobile home

Exterior - Wood frame; wood sheathing; average siding; sometimes stucco

Interior - Frame; drywall; some trim; usually more than one room

Plumbing - None in base; add from Section 63, Page 6*

Electrical - Standard fixtures and outlets

Heating - None in base; add from Section 12, Page 14*

Insulation - Included in base cost schedule

Built-Ins - None in Base; add from Section 12, Page 11*

Area	Wood Floors	Concrete Floors
300	16.00	14.95
400	15.05	14.00
500	14.45	13.45
600	14.05	13.05
700	13.80	12.70
800	13.60	12.60
900	13.45	12.45
1000	13.30	12.30
1100	13.20	12.20
1200	13.10	12.10

* Denotes a section from the 1982 Marshall Valuation Service Manual.

EXCELLENT MOBILE HOMES

"E" EXCELLENT - GRADE IF-5

The Excellent mobile home does not include the extreme luxury homes with individually designed interiors, although in many the buyers will have a choice of many interior items such as carpeting and color schemes before the mobile home is finished.

Exteriors are usually finished to resemble conventional housing with aluminum siding in various patterns and textures resembling wood. There is usually ornamentation of plastic, imitation brick or stones, etc.

Walls are 4" thick, 8' high, with excellent fenestration consisting of residential type windows, sliding doors and ornamental entrances.

Interiors will have excellent hardwood veneers. Cabinets and hardware are of excellent quality with counters of the best plastics and formica. Floor coverings will be of sheet vinyl and good to excellent carpeting. Ceilings may consist of beam exposure and cathedral type.

Heating is through ceiling ducts and is ready to adapt for air conditioning.

Kitchen equipment is of best quality and includes built in disposals and dishwashers. Excellent refrigerators with frozen food compartments may be built-in.

Plumbing consists of eight excellent quality fixtures and laundry service. The fixtures include any combination of lavatory, toilet, bathtub, shower, kitchen sink, and hot water heater. Additional plumbing fixtures typically found are roman tubs and wet bars.

Appliances, drapes, and furniture are not included in the base cost schedule.

08/85

MOBILE HOME SCHEDULE
EXCELLENT

LENGTH	8	10	12	14	16	18	20	22	24	26	28
20	33.24	28.35	24.69	21.95			38.92	37.26	35.60	34.41	33.21
22	32.77	27.87	24.24	21.54			37.96	36.31	34.66	33.46	32.26
24	32.30	27.39	23.79	21.13			37.00	35.36	33.72	32.51	31.31
26	31.83	26.91	23.34	20.72			36.04	34.41	32.78	31.56	30.36
28	31.35	26.43	22.91	20.31			35.08	33.46	31.84	30.61	29.41
30	31.00	26.07	22.58	20.01			34.12	32.51	30.90	29.66	28.46
32	30.65	25.71	22.25	19.70			33.16	31.56	29.96	28.71	27.51
34	30.36	25.42	21.98	19.45			32.20	30.61	29.02	27.76	26.56
36	30.07	25.13	21.71	19.20	21.06	20.04	31.24	29.66	28.08	26.81	25.61
38	29.78	24.84	21.44	18.95	20.28	19.30	30.28	28.71	27.14	25.86	24.66
40	29.50	24.55	21.18	18.72	19.50	18.56	29.30	27.73	26.16	24.94	23.72
42	29.26	24.31	20.96	18.52	19.30	18.42	28.92	27.33	25.74	24.52	23.30
44	29.02	24.07	20.74	18.32	19.10	18.17	28.53	26.93	25.32	24.10	22.88
46	28.81	23.86	20.55	18.10	18.86	17.95	28.19	26.57	24.95	23.73	22.51
48	28.60	23.64	20.36	17.96	18.72	17.81	27.84	26.21	24.57	23.35	22.13
50	28.41	23.45	20.18	17.80	18.55	17.65	27.53	25.89	24.24	23.02	21.80
52	28.21	23.26	20.00	17.63	18.37	17.48	27.22	25.57	23.91	22.69	21.47
54	28.04	23.08	19.84	17.49	18.22	17.34	26.94	25.28	23.61	22.40	21.18
56	27.86	22.90	19.68	17.34	18.07	17.19	26.66	24.99	23.31	22.10	20.88
58	27.70	22.74	19.54	17.21	17.93	17.06	26.41	24.73	23.04	21.83	20.62
60	27.53	22.58	19.39	17.07	17.79	16.92	26.16	24.46	22.76	21.56	20.35
62	27.38	22.43	19.26	16.95	17.66	16.80	25.93	24.23	22.52	21.32	20.11
64	27.23	22.28	19.12	16.82	17.53	16.68	25.69	23.98	22.27	21.07	19.86
66	27.09	22.15	18.99	16.71	17.42	16.57	25.48	23.81	22.04	20.89	19.64
68	26.95	22.01	18.86	16.59	17.29	16.45	25.26	23.54	21.81	20.61	19.41
70	26.82	21.88	18.74	16.48	17.18	16.34	25.06	23.33	21.60	20.40	19.20
72	26.69	21.75	18.63	16.38	17.08	16.25	24.86	23.13	21.39	20.20	19.00
74		21.61	18.51	16.27	16.96	16.13	24.65	22.95	21.20	20.00	18.80
76		21.49	18.39	16.17	16.86	16.04					
78		21.36	18.27	16.06	16.74	15.87					
80		21.23	18.15	15.95	16.63	15.82					
81				15.90	16.58	15.77					
82			18.05	15.85	16.53	15.72					
84				15.80	16.43	15.62					

MOBILE HOME ADDITION SPECIFICATION

EXCELLENT

Foundation - 8" reinforced concrete

Floors - 1" subfloor on 2" x 10" joist, 16" on center; good carpet; vinyl tile; insulation

Roof - Medium pitch; good sheathing; composition shingles; insulation; usually covers addition and mobile home

Exterior - Wood frame; wood sheathing; good siding; insulation

Interior - Frame; plaster or drywall; good trim; Two or more rooms

Plumbing - None in base; add from Section 63, Page 7*

Electrical - Good fixtures and outlets

Heating - None in base; add from Section 12, Page 14*

Insulation - Included in Base Cost Schedule

Built-Ins - None in Base; add from Section 12, Page 11*

Area	Wood Floors	Concrete Floors
500	17.35	15.95
600	16.90	15.50
700	16.50	15.10
800	16.20	14.80
900	15.95	14.55
1000	15.80	14.40
1100	15.65	14.25
1200	15.50	14.10

* Denotes a section from the 1982 Marshall Valuation Service Manual.

rw72

MOBILE HOME DEPRECIATION TABLE

TYPICAL LIFE EXPECTANCY IN YEARS

EFFECTIVE AGE IN YEARS	LOW COST 15 YRS	AVERAGE 20 YRS	GOOD 25 YRS	EXCELLENT 30 YRS
1	14	8	5	3
2	19	13	9	6
3	24	18	13	9
4	29	22	16	11
5	34	25	19	14
6	38	28	22	16
7	42	32	25	18
8	45	35	27	20
9	49	38	30	23
10	52	41	32	25
12	59	46	37	29
14	65	51	42	33
16	71	56	46	37
18	76	61	50	41
20	76	65	54	45
22	76	70	58	49
24	76	74	62	53
26	76	74	65	57
28	76	74	69	61
30	76	74	72	65
32	76	74	72	69

FARM BUILDINGS APPRAISAL MANUAL

DEPARTMENT OF REVENUE
PROPERTY ASSESSMENT DIVISION
RESIDENTIAL-COMMERCIAL BUREAU

TABLE OF CONTENTS

HEADING	PAGE(S)
INTRODUCTION	1-2
DEPRECIATION	3
DEPRECIATION TABLE	4
FARM BLDG. UNIT COST SCHEDULE	5-6-7
PRE-ENGINEERED STEEL BUILDING SCHEDULE	8
QUONSET BLDG. SCHEDULE	9
LOW COST FARM STORAGE BLDG. SCHEDULE	10
LOW COST IMPLEMENT SHED SCHEDULE	11
AVERAGE IMPLEMENT SHED SCHEDULE	12
GOOD IMPLEMENT SHED SCHEDULE	13
POLE BARN AND SHED SCHEDULE	14
FEEDING AND HAY SHED SCHEDULE	15
LOW COST BARN SCHEDULE	16
AVERAGE BARN SCHEDULE	17
GOOD BARN SCHEDULE	18
CATTLE FEEDING BUNK AND FENCING SCHEDULE	19
SWINE BARN SCHEDULE	20
CHICKEN HOUSE SCHEDULE	21
POTATO STORAGE -CLASS D SCHEDULE	22
POTATO STORAGE -CLASS C SCHEDULE	23
STEEL FARM SILO SCHEDULE	24
HORIZONTAL FARM SILO SCHEDULES	25
HOPPER BIN SCHEDULE	26
CORRUGATED STEEL GRAIN BIN SCHEDULE	27-30
ROUND CORRUGATED STEEL BINS	31
MEASURES	32
SQUARE FOOT PERIMETER MULTIPLIES	33

THE APPRAISAL OF FARM BUILDINGS

In appraising farm buildings, the appraiser should attempt to estimate the value their presence adds to the value of the farm. The degree of usefulness of the buildings should help establish their value.

Farm buildings are priced on a square foot basis predicated on the theory that the larger the area the less per square foot the building will cost. Condition should not be confused with quality. Estimates of replacement costs should be made as though the buildings were reproduced with new materials and average workmanship.

Specifications and cost data for several types of farm buildings are presented on the following pages. After inspecting the subject building and comparing its structural features with those found in the manual, adjustments can be made to compensate for variations from standard basic costs.

The following points should be kept in mind as a guide to the proper grade or quality key:

Low-Cost - recognized by poor design, low grade quality materials and labor.

Average - recognized by standard design, average quality materials and labor.

Good - recognized by good structural design, good quality materials and labor.

The quality key should be used when the subject is either superior or inferior to the standard for the grade chosen. The percentage of quality can vary from 5% to 15%, greater or less, than standard.

Buildings depreciate because of physical deterioration, loss of utility (functional obsolescence) and economic obsolescence.

In arriving at an estimated market value for farm buildings the appraiser is required to determine depreciation representing the effects of physical deterioration and functional and economic obsolescence. Obviously, consideration must be given to whether or not the specific building is ideally suited to or is even essential to the operation of the farm on which it is located. In some instances buildings are super-adequate. They reflect a cost far exceeding the actual need of the farm operation. This is very true of some barns which were built to care for draft animals of a bygone era. The use of good judgement will result in realistic appraisals.

ROEW:ttA

The physical condition of agricultural buildings should be compared to the near-perfect condition of similar new buildings, based on detailed inspection of all components. Gauging effective age through observed physical condition is the only acceptable method of determining physical deterioration. Functional and economic obsolescence must also be observed and accounted for to determine depreciation from all causes.

Rating	Physical Condition
Excellent	New, or no sign of deterioration.
Good	Structurally sound - well maintained. Some deterioration of minor components visible.
Average	Structurally sound, but apparent that repairs are needed; some components require replacement. Moderately worn.
Fair	Some minor structural deterioration. Signs of wear and effects of decay and erosion apparent throughout. Maintenance deferred. Rehabilitation and replacement needed.
Poor	Extensive structural deterioration. Requires major repair and replacement to restore building to serviceable condition.
Dilapidated	Structurally unsound. Requires complete replacement of major components and extraordinary repairs. May have substandard utility.

DEPRECIATION OF FARM BUILDINGS

BASIC DEPRECIATION TABLE (GUIDE ONLY)

EFFECTIVE AGE	EXCELLENT*	GOOD*	AVERAGE*	LOW COST*
1	1	2	2	3
2	3	4	4	6
3	4	5	6	9
4	5	7	9	12
5	7	9	12	15
6	9	11	14	18
7	10	13	17	22
8	12	15	19	25
9	14	17	22	29
10	16	20	25	32
11	18	22	28	36
12	20	24	31	40
13	22	26	34	44
14	24	29	37	48
15	26	32	40	52
16	28	34	43	55
17	30	37	46	59
18	32	40	50	63
19	34	43	53	67
20	37	45	56	71
21	40	48	59	74
22	42	51	62	76
23	45	54	65	78
24	47	57	68	79
25	50	60	71	79
26	52	62	74	80
27	55	65	75	
28	57	68	77	
29	60	70	78	
30	62	71	79	
31	65	75	79	
32	67	74	80	
33	69	76		
34	71	77		
35	73	78		
36	74	79		
37	75	79		
38	77	80		
39	78			
40	79			
41	79			
42	80			

* Denotes quality of construction not physical condition.

AVERAGE FARM BUILDING UNIT COST SCHEDULE
COST IN PLACE

FOUNDATION - FOOTINGS & WALLS
(Per Square Foot)

	LOW	AVERAGE	HEAVY Mud
Sills	.15	.24	.35
Poured concrete footings and foundations wall	.55	.76	1.03

FLOORS
(Per Sq. Ft.)

		Joists	
Planking 3"	2.07	2" x 6", 16" O.C.	$ .73
		2" x 8", 16" O.C.	.92
		2" x 10", 16" O.C.	1.11
Subfloor - Ply ½"	0.71	2" x 12", 16" O.C.	1.29
Asphalt on ground	$0.60	2" x 6", 24" O.C.	.50
Concrete Slab	1.46	2" x 8", 24" O.C.	.63
Flooring, 1" T & G	0.93	2" x 10", 24" O.C.	.76
Flooring, 2" T & G	1.66	2" x 12", 24" O.C.	.88

LOFTS ADJUSTMENTS
(Per Sq. Ft.)

Loft costs include floor structure and supports only.

EXCELLENT	GOOD	AVERAGE	LOW COST	POOR	CHEAP
$5.75	$4.02	$2.80	$1.96	$1.37	$ .96

CEILING
(Per Sq. Ft.)

Insulation	$0.22	Plywood 1/4" or 3/8"	$1.03
		Sheetrock-Taped & Painted	0.74
Plaster Cement-Gunite	0.76	Wood- T & G	0.99

ROOF FRAMING - SHEATHING AND COVER
(Per Sq. Ft.)

Fiberglass	$2.02	2" x 4", 24" O.C.	$0.48	
Metal	1.61	2" x 6", 24" O.C.	0.68	
Roll Composition	0.44	2" x 8", 24" O.C.	0.87	
Sheathing 1" solid	0.81	Shingles-wood	1.40	Sheathing
1" spaced	0.57	Shingles-asphalt	0.65	
Sheathing ½" plywood	0.71			

EXTERNAL WALL
(Per Sq. Ft. of Wall Area)

2" x 4", 16" O.C.	$0.70	Plywood-3/8" to 5/8"	$1.11
2" x 4", 24" O.C.	0.61	Wood - Siding 1"	1.54
2" x 6", 24" O.C.	0.77		
Board and Batten-			
Cedar or Redwood	1.56	Posts and Girts	.76
Cedar Shingles	1.21	Shakes	1.36
Concrete Block 8"	4.20	Sheathing 1" solid	.81
Aluminum	1.46	Stucco on masonry	1.19
		Per Sq. Ft. of Door Area	
Galvanized steel	1.61	Doors, wood-hinged	8.06-12.85
		Doors, wood, sliding	3.07- 3.63
Insulation-Fiberglass	0.31	Overhead Door	3.02- 4.54
		Swinging Door	2.77- 4.03
		Per Sq. Ft. of Window Area	
Paint	0.23	Windows, single, hung-wood	6.05- 8.06

INTERIOR
(Per Sq. Ft.of Wall Area)

Plain concrete block wall 8"	$4.20
Wood studs, wood finish	
One side	1.41
Two sides	1.88

PLUMBING
(Per Fixture)

Floor Drain	$180
Lavatory	308
Shower Stall	365
Kitchen Sink	365
Slop Sink	354
Sump Pump	226
Urinal	400
Water Closet	478
Rough-In	185
Water Heater	344
Hydrant	110

ELECTRICAL WIRING
(Per Sq. Ft.)

Finished Building:		Exposed Circuits:	
Non Metallic	$1.30	Non Metallic	$0.44
Flex Conduit	1.92	Flex Conduit	0.70
Rigid Conduit	2.37	Rigid Conduit	0.89

CATTLE SCALES

5 Ton	$ 6,090.
10 Ton	8,080.
Printer	1,350.

TRUCK SCALES

20 Ton	$ 14,300
30 Ton	16,500
40 Ton	19,100

UNIT IN PLACE
HEATING & COOLING ADJUSTMENTS
(Per Sq. Ft.)

	LOW COST	AVERAGE	GOOD
Electric baseboard or cable	$1.15	$1.38	$1.62
Electric wall heaters	.54	.61	.71
Forced air	1.18	1.51	1.94
Furnace, floor or wall	.54	.65	.77
Heaters, vented	.32	.40	.50
Hot water	1.96	2.52	3.21
Space heater	.51	.68	.94
Steam	1.66	2.09	2.63
Combined heating & cooling	3.01	4.19	5.90
Evaporative coolers	1.06	1.24	1.48
Refrigerated air conditioners	1.83	2.36	3.01
Ventilation only, with blowers & ducts	.35	.44	.53

PRE-ENGINEERED STEEL BUILDINGS

Costs are for Good Quality prefabricated galvanized steel buildings, with standard doors and windows, erected on concrete footings, without floors, lights or heat.

		Length to Width Ratio					
Width	Wall Height	1.0	1.5	2.0	3.0	4.0	5.0
20'	10'	7.64	7.18	6.88	6.47	6.19	5.98
24'	10'	7.31	6.92	6.66	6.31	6.06	5.88
30'	12'	6.82	6.53	6.32	6.07	5.87	5.73
32'	12'	6.66	6.41	6.22	6.00	5.83	5.69
36'	12'	6.19	6.11	5.97	5.83	5.70	5.59
40'	14'	6.90	6.48	6.19	5.80	5.55	5.38
42'	14'	6.75	6.36	6.10	5.74	5.51	5.35
48'	14'	6.30	6.02	5.82	5.57	5.39	5.26
50'	14'	6.15	5.90	5.73	5.51	5.35	5.23
54'	14'	6.00	5.77	5.62	5.41	5.27	5.16
56'	14'	5.92	5.71	5.56	5.37	5.22	5.12
60'	14'	5.77	5.58	5.45	5.27	5.14	5.05
80'	16'	5.80	5.62	5.47	5.29	5.17	5.08
100'	16'	5.60	5.42	5.29	5.13	5.02	4.92
125'	16'	5.43	5.26	5.15	4.98	4.87	4.79
150'	18'	5.53	5.36	5.26	5.12	5.00	4.93
200'	18'	5.38	5.24	5.14	5.00	4.90	4.83

Height base	Add or Subtract 2% for each foot of deviation from
Aluminum	1.10 x Base
Enameled Steel	1.07 x Base
Slant Wall Buildings	Deduct 10%
Grain Package	Add 5% to Base Cost

For further adjustments see Unit In Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

PRE-ENGINEERED STEEL BUILDINGS

PRE-ENGINEERED STEEL BUILDINGS

QUONSET BUILDINGS

QUONSET BUILDINGS

QUONSET BUILDING

General Descriptions: Costs are gof Good Quality galvanized steel building with doors in end walls only, erected on concrete footings, without floors, lights or heat.

	Length																	
Width	30'	34'	36'	40'	42'	44'	48'	50'	54'	56'	60'	64'	72'	80'	84'	90'	96'	100'
24'	6.32	6.10	5.99	5.82	5.73	5.66	5.52	5.46	5.33	5.28	5.17	5.08	4.90	4.75	4.68	4.58	4.49	4.41
30'	6.56	6.34	6.23	6.06	5.97	5.90	5.76	5.70	5.57	5.52	5.41	5.32	5.14	4.99	4.92	4.82	4.73	4.65
32'	6.68	6.46	6.35	6.18	6.09	6.02	5.88	5.82	5.69	5.64	5.53	5.44	5.26	5.11	5.04	4.99	4.85	4.77
36'				6.42	6.33	6.26	6.11	6.05	5.93	5.87	5.76	5.67	5.49	5.37	5.27	5.17	5.08	5.00
40'					6.56	6.49	6.34	6.28	6.16	6.10	5.99	5.90	5.72	5.57	5.50	5.40	5.31	5.25
48'													5.87	5.72	5.64	5.54	5.44	5.38
68'													6.26	6.09	6.00	5.89	5.78	5.70

	108'	112'	120'	124'	134'	140'	150'	160'	170'	180'	190'	200'	210'	220'	230'	240'	250'	260'
32'	4.70	4.66	4.57	4.49	4.43	4.37	4.29	4.22										
36'	5.05	5.00	4.91	4.86	4.47	4.71	4.63	4.56										
40'	5.16	5.11	5.02	4.98	4.88	4.82	4.74	4.67	4.60	4.53	4.47	4.41	4.35	4.30	4.25	4.21		
48'	5.29	5.24	5.14	5.10	5.00	4.93	4.85	4.77	4.70	4.63	4.56	4.50	4.44	4.39	4.34	4.29		
68'	5.60	5.57	5.44	5.40	5.29	5.22	5.12	5.02	4.94	4.87	4.80	4.73	4.67	4.61	4.55	4.50	4.45	4.40

For Further adjustments see Unit In Place Cost Schedule pages 5 through 7.

Grain Package - Add 5% to Base Cost

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

LOW COST FARM STORAGE BUILDING

(COST PER SQ.FT.)

FOUNDATION:	C	.55	C	.55	C	.55	C	.55
FLOOR:	W	1.26	C	1.22	W	1.26	C	1.22
EXTERIOR WALLS:	BB	1.58	BB	1.58	M,W	2.73	M,W	2.73
ROOF:	WS	3.02	WS	3.02	WS	3.02	WS	3.02
		$6.41		$6.37		$7.56		$7.52

FOUNDATION:	MS	.14	MS	.14	MS	.14	MS	.14
FLOOR:	W	1.26	C	1.22	W	1.26	C	1.22
EXTERIOR WALLS:	BB	1.58	BB	1.58	M,W	2.73	M,W	2.73
ROOF:	WS	3.02	WS	3.02	WS	3.02	WS	3.02
		$6.00		$5.96		$7.15		$7.11

ADJUSTMENTS:

DEDUCT $0.79 FOR ROLLED ROOFING - (WOOD SHINGLES = $1.15 - .36 RR)

DEDUCT $0.63 FOR COMPOSITION SHINGLES - (WOOD SHINGLES = $1.15 - .52 Comp Shingles)

ADD + $0.17 FOR METAL ROOF - (WOOD SHINGLES = $1.15 - $1.32 Metal)

See abbreviations found on farm improvement appraisal card.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

LOW COST IMPLEMENT SHEDS

LOW COST IMPLEMENT SHEDS

LOW COST IMPLEMENT SHEDS

LOW COST
IMPLEMENT SHED

GENERAL DESCRIPTION:	Implement sheds are designed for the storage and maintenance of equipment.
FOUNDATION:	Mud sills
WALLS:	Corrugated metal on wood girts. Base height 10'.
FLOOR:	None in base cost.
ROOF:	Low cost shed or gable roof.
OTHER FEATURES:	None.
HEAT:	None in base cost.

Class "D"

$4.05

HEIGHT: Multipliers Page 33.

FLOOR AREA: Perimeter Multipliers. See page 33.

For further adjustments see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

AVERAGE IMPLEMENT SHEDS

AVERAGE IMPLEMENT SHEDS

AVERAGE IMPLEMENT SHEDS

AVERAGE
IMPLEMENT SHED

GENERAL DESCRIPTION:	Implement sheds are designed for the storage and maintenance of equipment.
FOUNDATION:	Concrete or stone piers.
WALLS:	Class D: Average wood frame, metal or wood siding, Class C: Painted concrete block or brick. Base height - 10'.
FLOORS:	Concrete. (Deduct for no concrete floor)
ROOF:	Average shed or gable, metal covering.
OTHER FEATURES:	None.
HEAT:	None in base cost.

Class "C"	Class "D"
$7.70	$5.80

ADJUSTMENTS

HEIGHT:	Multipliers Page 33.
FLOOR AREA:	Perimeter Multipliers. See page 33.

For further adjustments see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

GOOD IMPLEMENT SHEDS

GOOD
IMPLEMENT SHED

GENERAL DESCRIPTION:	Implement sheds are designed for the storage and maintenance of equipment.
FOUNDATION:	Concrete walls and footings.
WALLS:	Class D: Good wood frame, metal siding with sheathing Class C: Reinforced concrete block, painted. Base height 10'.
FLOORS:	Good concrete; (Deduct for no concrete floor.)
ROOF:	Steel or wood trusses, good roof cover.
OTHER FEATURES:	Electric lighting, 220 volt service and water service.
HEAT:	None in base cost.

Class "C"	Class "D"
$10.85	$8.15

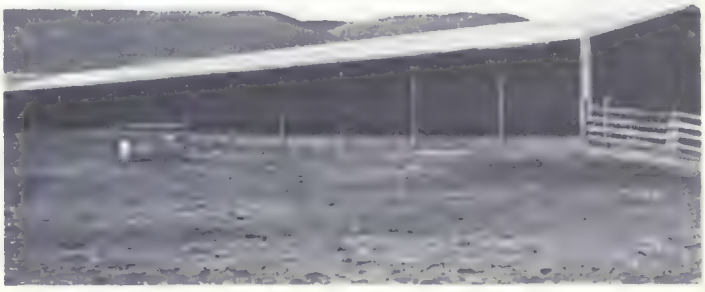
ADJUSTMENTS

HEIGHT:	Multipliers Page 33.
FLOOR AREA:	Perimeter Multipliers. See page 33.

For further adjustments see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can by accomplished by using a quality grade factor of plus or minus 5% to 15%.

POLE BARNS



POLE SHEDS

POLE SHEDS

POLE BARNS AND SHEDS

	Low Cost	Average	Good
FOUNDATION:	Post in Ground	Post in Ground	Post in Ground
FLOORS:	None	None	None
ROOF:	Shed Type 2"x6" rafters 1"x4" purlins & galv. steel cover.	Gable 2"x6" rafters, 2"x4" purlins & galv. steel cover.	Gable 2"x8" rafters or trusses 2"x6" purlins, braces, galv.steel cover.
WALLS:	Untreated poles 4" to 6" dia. with 3" x 6" beams. Wood clad 3 sides. Base Height 10'	Treated poles 6" to 8" dia., 6" x 6" beams. Metal clad 3 sides. Base Height 10'	Treated poles 6" to 10" dia., 6" x 8" beams. Metal clad 4 sides. Base Height 10'
OTHER FEATURES	None	Feeders	Feeders and Stalls

Cost Per Sq. Ft.

LOW	AVERAGE	GOOD
$2.30	$3.55	$5.50

ADJUSTMENTS

HEIGHT: Multipliers See Page 33.

FLOOR AREA: Perimeter Multipliers. See Page 33.

For further adjustments see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

HAY SHEDS

HAY SHEDS

FEEDING AND HAY SHED

	LOW	AVERAGE	GOOD
FOUNDATION:	Post in Ground	Post in Ground	Piers
FLOORS:	None	None	None
ROOF:	Wood frame, low pitch with metal cover.	Wood frame, light trusses & metal cover.	Heavy frame, good trusses & purlins, metal cover.
WALL:	Minimum, light frame, no siding.	Average frame, no siding.	Wood frame, partially sided.
OTHER FEATURES:	None	None.	None.

PRICE PER SQUARE FOOT

LOW	AVERAGE	GOOD
$1.95	$2.75	$4.00

ADJUSTMENTS

HEIGHT: None used

FLOOR AREA: None used

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

LOW-COST BARNS

LOW-COST BARNS

BARNS
LOW COST CONSTRUCTION

GENERAL DESCRIPTION:	Barns are general purpose buildings; some having dairy facilities, horse stalls, hay and grain storage and other uses.
FOUNDATION:	Mud sills.
WALLS:	Class "D" = Board or steel on wood frame, cheap doors and windows. Class "C" = Block or clay tile, cheap doors and windows. Base Height 10'
FLOOR:	None in base cost.
ROOF:	Flat or gable type, rolled roofing, or cheap shingles, wood sheathing, wood rafters and framing.
OTHER FEATURES:	Few stalls and bins.

Class "C"	Class "D"
$7.40	$5.70

ADJUSTMENTS

HEIGHT:	Multipliers See Page 33.
FLOOR AREA:	Perimeter Multipliers. See page 33.

For further adjustments see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

AVERAGE BARNS

AVERAGE BARNS

BARN
AVERAGE CONSTRUCTION COST

GENERAL DESCRIPTION:	Barns are general purpose buildings; some having dairy facilities, horse stalls, hay and grain storage and other uses.
FOUNDATION:	Concrete or stone.
WALLS:	Class "D" = Board & batten, steel or low cost siding on wood frame, few windows Class "C" = Concrete block or brick, few windows. Base Height 10'
FLOOR:	None in base cost.
ROOF:	Gambrel or gable. Wood rafters and framing, shingles, aluminum, or steel.
OTHER FEATURES:	Min. electric lighting. Stalls and drives. Min. water outlets.

Class "C"	Class "D"
$9.65	$7.75

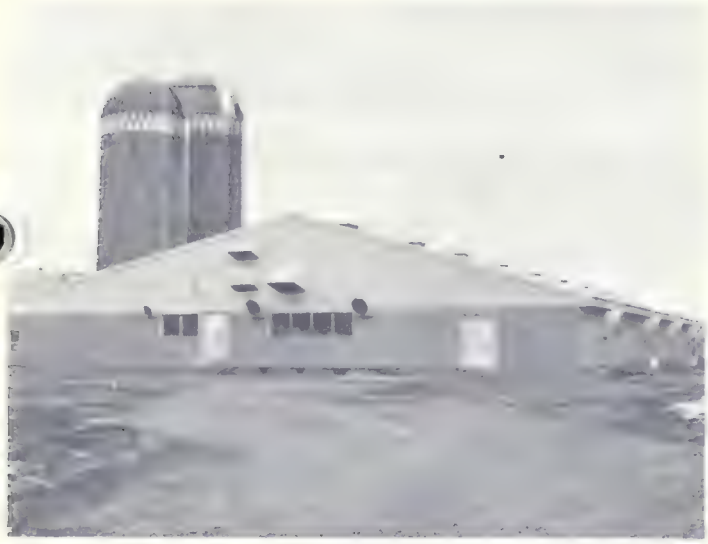
ADJUSTMENTS

HEIGHT:	Multipliers See Page 33.
FLOOR AREA:	Perimeter Mulitpliers. See Page 33.

For further adjustments, see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

GOOD BARNS



GOOD BARNS

BARN
GOOD CONSTRUCTION

GENERAL DESCRIPTION:	Barns are general purpose buildings often having dairy facilities, horse stalls, hay and grain storage and other uses. Good barns are well constructed, usually with utilities available inside and some fenestration.
FOUNDATION:	Concrete walls and footings.
WALLS:	Class D: Good wood siding on sheathing, on wood frame Class C: Good painted concrete block or brick Base Height 10'
FLOOR:	Concrete. (Deduct for no concrete floor)
ROOF:	Gambrel type, wood or steel frame, clear span, heavy asphalt shingles.
MECHANICAL FEATURES:	Electric lighting. Water piping and hose bib.
OTHER FEATURES:	Grain bin, good stalls and drives.

Class "C"	Class "D"
$12.50	$10.45

ADJUSTMENTS

HEIGHT:	Multipliers. See page 33.
FLOOR AREA:	Perimeter Multipliers. See page 33.

For further adjustments, see Unit in Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

FEED BUNKS

CATTLE FEEDING BUNKS AND FENCING COSTS

Used in feeding where feeding from either side is desirable.
Typical bunks are constructed of concrete; some have plank sides and post construction.

Typical farmer-built feed bunks are constructed of rough lumber and posts; some are made of finished planking.
Feeding from one side only.

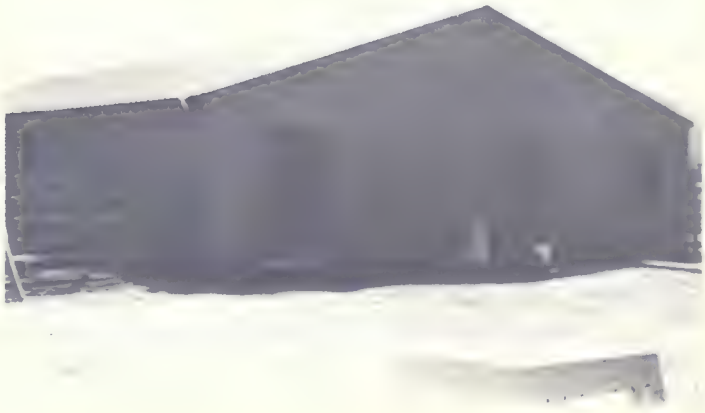
BASE COSTS	Per Lineal Foot
Concrete bunk	$19.75
Plank bunk	12.80

BASE COSTS	Per Lineal Foot
Rough lumber fence bunk	$11.50
Concrete fence bunk	13.80

ADJUSTMENTS	Cost Per Square Foot
Roof	$ 2.35
Concrete apron	1.45

Further refinements to this grade of construction can be accomplished by using a quqlity grade factor of plus or minus 5% to 15%.

SWINE BARNS



SWINE BARNS

SWINE BARN

FOUNDATION:	Concrete wall and footing
WALLS:	Class "C" = Concrete or concrete block Class "D" = Wood or Steel siding on frame; and insulated Base Height 10'
FLOORS:	Concrete - slatted floors are additional (Deduct for no concrete floor)
ROOF:	Gable, asphalt shingles, ceilings insulated, plywood finish
OTHER FEATURES:	Electricity and water available

BASE PRICE (Per Sq. Ft.)

Class "C"	Class "D"
$9.70	$7.55

ADJUSTMENTS

Finishing-Confinement (per Lin. Ft.)	
Wood Pens	$ 8.00
Steel Pens	29.75
Masonry Pens	8.00

Farrowing (Each)	
Steel Farrowing Stalls	$480
Steel Farrowing Pens	450
Wood Farrowing Pens	125
Ventilation Fan	440
Concrete Block Pens	195

25% Slatted Floor and Pit, add $1.80 per Sq. Ft. of Total Bldg. Area

100% Slatted Floor and Pit, add $5.50 per Sq. Ft. of Total Bldg. Area

Liquid Manure Tanks - Rectangular
(10' deep and 20' wide)

Length	Gal. Cap.	Cost
20'	30,000	$ 7,380
40'	60,000	12,300
80'	120,000	22,140

Outside Improvements

Concrete Exercise Aprons-$1.45 Sq. Ft.

For Open Pit - deduct 30% of Cost

HEIGHT: Multipliers. See Page 33.

FLOOR AREA: Perimeter Multipliers. See Page 33.

For further adjustments see Unit In Place Cost Schedule pages 5 through 7.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

CHEAP CHICKEN HOUSES

LOW COST CHICKEN HOUSES

AVERAGE CHICKEN HOUSES

GOOD CHICKEN HOUSES

CHICKEN HOUSE

GENERAL DESCRIPTION: Chicken houses are designed for the care and housing of chickens.

	CHEAP	LOW	AVERAGE	GOOD
FOUNDATION	Post in Ground	Mud Sills	Concrete	Concrete
FRAME	Post	Light wood	Wood	Good wood
FLOORS	Dirt	Wood	Wood or Concrete	Concrete
EXTERIOR WALLS	Boards & wire Base Height 10'	Wood Base Height 10'	Steel or wood Base Height 10'	Good steel or wood; Windows Base Height 10'
INTERIOR	None	Unfinished	Some finished	Finished with Plywood and Insulated
ROOF	Shed Rolled Roofing	Shed Rolled Roofing or light asphalt roof cover.	Gable, wood sheathing, Asphalt shingles or Galv. steel roof cover.	Good Rafter and cover
ELECTRICAL	None	Minimum	Adequate	Good
PLUMBING	None	Minimum	Adequate	Adequate
HEATING	None	None	None	None
	BASE $3.95	BASE $5.80	BASE $7.60	BASE $10.00

ADJUSTMENTS

HEIGHT: Multipliers. See Page 33.

FLOOR AREA: Perimeter multipliers. See Page 33.

For 2nd or 3rd story use 70% of above base costs.

For further adjustments see the Unit in Place Schedule on pages 5 through 7.

Further refinements to these grades can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

LOW COST POTATO STORAGE

AVERAGE POTATO STORAGE

GOOD POTATO STORAGE

POTATO STORAGE

CLASS C

	AVERAGE	GOOD
FOUNDATION:	Concrete	Concrete
WALLS:	Block exterior Base Height 10'	Good block or concrete Base Height 10'
FLOORS:	Plank on concrete	Elevated plank over concrete
ROOF:	Wood, metal, insulated	Heavy roof, insulated
PLUMBING	None	Adequate
LIGHTING	Minimum	Adequate
HEAT	None	None
OTHER FEATURES	Air Channels	Air Channels
	BASE $13.85	BASE $23.30
HEIGHT:	Multipliers See Page 33.	
FLOOR AREA:	Perimeter Multipliers. See Page 33.	

For further adjustments, see Unit In Place Cost Schedule Pages 5 through 7.

Further refinements to these grades can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

GRAIN SILOS

GRAIN SILOS

STEEL FARM SILOS

General Description: silos are used to store corn silage, grass silage hay silage, high moisture grain and other fermented feeds.

		HEIGHT					
Dia.	Circum.	15'	20'	25'	30'	35'	40'
10'	31'	3,120	4,142	5,111	6,133	7,155	8,125
12'	38'	3,766	4,949	6,187	7,424	8,608	9,792
14'	44'	4,464	5,864	7,263	8,662	10,115	11,513
16'	50'	5,111	6,725	8,339	9,953	11,621	13,235
18'	57'	5,768	7,532	9,415	11,298	13,127	15,065
20'	63'		8,500	10,491	12,590	14,741	16,786
22'	69'			11,836	14,204	16,463	18,831
24'	75'			13,020	15,710	18,185	21,090
26'	82'				16,894	19,799	22,381
32'	94'				19,692	22,812	26,148
36'	113'					27,762	31,636

		HEIGHT					
Dia.	Circum.	45'	50'	60'	70'	80'	100'
10'	31'	9,146	10,168				-
12'	38'	10,975	12,266				-
14'	44'	12,912	14,419	17,216			-
16'	50'	14,849	16,571	19,799	23,135		-
18'	57'	16,894	18,830	22,849	26,255	29,914	37,466
20'	63'	18,830	20,982	25,179	29,375	33,572	41,965
22'	69'	21,090	23,458	28,084	32,712	37,230	46,485
24'	75'	23,242	25,825	30,775	35,940	41,105	51,650
26'	82'	25,287	27,977	33,572	39,168	44,763	55,739
32'	94'	29,483	32,496	39,383	45,839	52,295	65,208
36'	113'	35,725	39,598	47,560	55,523	63,486	79,197

ADJUSTMENTS

Ladders: $33.50 + 4.50 per lineal foot

For concrete stave silos multiply base costs by .56.

HORIZONTAL SILOS

HORIZONTAL FARM SILOS

General Description: Silos are used to store corn silage, grass silage, hay silage, high moisture grain and other fermented feeds.

GROUND FLOOR AREA (SQ. FT.)	SILOS TYPES		
	PRE-CAST WALL SUPPORTS, CONCRETE TILT-UP PANELS	BRACED POLES CONCRETE TILT-UP PANELS *CONCRETE FLOOR	POLE FRAME WOODEN WALLS *CONCRETE FLOOR
1,500	6.51	5.00	4.49
2,000	6.45	4.95	4.44
2,500	6.39	4.90	4.39
3,000	6.33	4.85	4.35
3,500	6.26	4.80	4.30
4,000	6.20	4.75	4.26
4,500	6.13	4.70	4.21
5,000	6.07	4.66	4.17
5,500	6.01	4.61	4.12
6,000	5.95	4.56	4.08
6,500	5.89	4.51	4.03
7,000	5.83	4.47	3.99
7,500	5.77	4.43	3.95
8,000	5.71	4.39	3.91
8,500	5.65	4.35	3.87
9,000	5.59	4.31	3.83

* Deduct for no concrete floor

HOPPER BINS

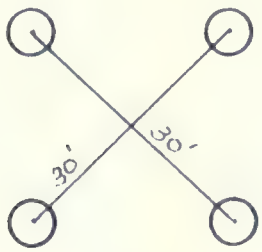
HOPPER BINS

General Description: Costs are average of typical farm hopper bins with roof and manhole, including necessary steel structural supports. Capacity in tons is figured at 50 lbs. per bushel.

Dia.	Circumference	Height (Ground to Top)	Bu. Cap.	Tons	Costs (Includes Concrete Footings)
6'	19'	10'	120	3	$ 761
	19'	16'	240	6	878
	19'	21'	360	9	1,054
	19'	25'	480	12	1,230
	19'	28'	600	15	1,347
9'	28'	14'	300	7.8	1,493
	28'	17'	450	11.3	1,640
	28'	20'	590	14.8	1,786
	28'	25'	855	21.4	2,108
	28'	28'	1,000	25	2,225
	28'	31'	1,130	28.5	2,400
12'	38'	20'	870	21.8	3,600
	38'	25'	1,345	33.6	3,924
	38'	31'	1,825	45.6	4,421
	38'	36'	2,300	57.5	4,978
	38'	42'	2,780	69.5	5,534
15'	47'	36'	4,150	103.8	6,237
	47'	42'	4,900	122.5	6,793
18'	56'	36'	5,500	137.5	7,349

Circumference as a rule is difficult if not impossible to measure - use diameter to figure bushel capacity.

Measure diagonal between supports under bottom cone.



LOW COST GRAIN BINS

AVERAGE GRAIN BINS

GOOD GRAIN BINS

CORRUGATED STEEL GRAIN BINS

Cost are averages for utility type bins usually found on farms and ranches. Costs of these average bins are for tank with door and manhole, erected. Height is to the eave.

FORMULAS TO USE

Bushel Capacity = Diameter Squared x .7854 x Shell Height x .8036 (Round to nearest 100 Bu.) Cement Costs = Diameter Squared x .7854 x .42 (5 in.) x $3.00 per Cubic Foot.

AVERAGE GRAIN BIN COSTS

CIR.	DIA.	HGT.	BU. CAP.	AVG. BIN COST w/o Floor	CONC. FLOOR	STEEL FLOOR
31'	10'	8'	500	$ 837	$ 99.00	$ 72.00
	10'	13'	820	1219	99.00	72.00
	10'	14'	885	1297	99.00	72.00
38'	12'	9'	820	1219	143.00	119.00
	12'	11'	1000	1435	143.00	119.00
	12'	15'	1360	1680	143.00	119.00
41'	13'	8'	850	1255	167.00	143.00
	13'	10'	1100	1503	167.00	143.00
44'	14'	7'	900	1315	192.00	167.00
	14'	8'	1000	1435	192.00	167.00
	14'	10'	1200	1571	192.00	167.00
	14'	12'	1500	1777	192.00	167.00
	14'	13'	1600	1844	192.00	167.00
	14'	16'	2000	2122	192.00	167.00
	14'	18'	2200	2182	192.00	167.00
47'	15'	7'	1000	1435	221.00	191.00
	15'	10'	1400	1710	221.00	191.00
	15'	11'	1600	1844	221.00	191.00
	15'	14'	2000	2122	221.00	191.00
50'	16'	8'	1300	1638	252.00	215.00
	16'	11'	1800	1982	252.00	215.00
	16'	12'	1900	2052	252.00	215.00
	16'	14'	2300	2212	252.00	215.00
	16'	16'	2600	2330	252.00	215.00
	16'	20'	3200	2630	252.00	215.00
53'	17'	8'	1500	1775	284.00	239.00
	17'	9'	1600	1842	284.00	239.00
	17'	10'	1800	1982	284.00	239.00
	17'	11'	2000	2122	284.00	239.00
	17'	13'	2400	2243	284.00	239.00
	17'	14'	2600	2331	284.00	239.00
	17'	15'	2700	2377	284.00	239.00
	17'	16'	2900	2466	284.00	239.00
57'	18'	5'	1000	1435	319.00	263.00
	18'	6'	1200	1571	319.00	263.00
	18'	8'	1600	1844	319.00	263.00

CIR.	DIA.	HGT.	BU. CAP.	AVG. BIN COST	CONC. FLOOR	STEEL FLOOR
	18'	9'	1800	1982	$319.00	$263.00
	18'	10'	2000	2122	319.00	263.00
	18'	11'	2200	2182	319.00	263.00
	18'	12'	2500	2287	319.00	263.00
	18'	13'	2700	2377	319.00	263.00
	18'	14'	2900	2466	319.00	263.00
	18'	15'	3100	2572	319.00	263.00
	18'	16'	3300	2690	319.00	263.00
	18'	17'	3500	2810	319.00	263.00
	18'	18'	3700	2941	319.00	263.00
	18'	19'	3900	3071	319.00	263.00
	18'	21'	4300	3331	319.00	263.00
60'	19'	8'	1800	1982	356.00	287.00
	19'	10'	2300	2212	356.00	287.00
	19'	11'	2500	2287	356.00	287.00
	19'	13'	3000	2511	356.00	287.00
	19'	14'	3200	2630	356.00	287.00
	19'	16'	3600	2875	356.00	287.00
	19'	17'	3900	3071	356.00	287.00
	19'	18'	4100	3201	356.00	287.00
	19'	20'	4600	3527	356.00	287.00
	19'	21'	4800	3581	356.00	287.00
63'	20'	10'	2500	2287	394.00	311.00
	20'	11'	2800	2451	394.00	311.00
	20'	12'	3000	2511	394.00	311.00
	20'	14'	3500	2810	394.00	311.00
	20'	16'	4000	3318	394.00	311.00
	20'	17'	4300	3331	394.00	311.00
	20'	18'	4500	3461	394.00	311.00
66'	21'	9'	2500	2287	436.00	359.00
	21'	13'	3600	2875	436.00	359.00
	21'	14'	3900	3071	436.00	359.00
	21'	15'	4200	3266	436.00	359.00
	21'	16'	4500	3461	436.00	359.00
	21'	17'	4700	3548	436.00	359.00
	21'	18'	5000	3646	436.00	359.00
	21'	19'	5300	3843	436.00	359.00
69'	22'	8'	2400	2242	478.00	400.00
	22'	10'	3100	2572	478.00	400.00
	22'	11'	3400	2750	478.00	400.00
	22'	12'	3700	2941	478.00	400.00
	22'	13'	4000	3318	478.00	400.00
	22'	14'	4300	3199	478.00	400.00
	22'	15'	4600	3527	478.00	400.00
	22'	16'	4900	3613	478.00	400.00
	22'	18'	5500	3972	478.00	400.00
	22'	23'	7000	4700	478.00	400.00
72'	23'	8'	2700	2377	521.00	442.00
	23	11'	3700	2941	521.00	442.00
	23'	13'	4300	3331	521.00	442.00

CIR.	DIA.	HGT.	BU. CAP.	AVG. BIN COST	CONC. FLOOR	STEEL FLOOR
	23'	16'	5300	3843	521.00	442.00
	23'	18'	6000	4298	521.00	442.00
[illegible]	24'	10'	3600	2875	568.00	478.00
	24'	12'	4400	3449	568.00	478.00
	24'	14'	5100	3712	568.00	478.00
	24'	15'	5500	3973	568.00	478.00
	24'	16'	5800	4168	568.00	478.00
	24'	18'	6500	4483	568.00	478.00
	24'	19'	6900	4886	568.00	478.00
	24'	21'	7600	4962	568.00	478.00
	24'	23'	8400	5465	568.00	478.00
	24'	24'	8700	5654	568.00	478.00
79'	25'	10'	3900	3071	616.00	520.00
	25'	11'	4300	3331	616.00	520.00
	25'	12'	4700	3548	616.00	520.00
	25'	13'	5100	3712	616.00	520.00
	25'	14'	5500	3973	616.00	520.00
	25'	15'	5900	4232	616.00	520.00
	25'	16'	6300	4494	616.00	520.00
82'	26'	10'	4300	3415	666.00	562.00
	26'	11'	4700	3548	666.00	562.00
	26'	12'	5100	3712	666.00	562.00
	26'	15'	6400	4559	666.00	562.00
	26'	18'	7700	5024	666.00	562.00
85'	27'	11'	5100	3712	718.00	598.00
	27'	12'	5500	3973	718.00	598.00
	27'	14'	6400	4559	718.00	598.00
	27'	17'	7800	5087	718.00	598.00
	27'	18'	8300	5402	718.00	598.00
	27'	20'	9200	5968	718.00	598.00
	27'	24'	11000	6933	718.00	598.00
	27'	40'	18400	11222	718.00	598.00
88'	28'	10'	4900	3613	772.00	640.00
	28'	12'	5900	4232	772.00	640.00
	28'	20'	9900	6349	772.00	640.00
91'	29'	10'	5300	3841	830.00	681.00
	29'	11'	5900	4232	830.00	681.00
	29'	12'	6400	4559	830.00	681.00
	29'	13'	6900	4824	830.00	681.00
	29'	14'	7400	4874	830.00	681.00
94'	30'	7'	4000	3318	887.00	717.00
	30'	10'	5700	4103	887.00	717.00
	30'	11'	6200	4428	887.00	717.00
	30'	12'	6800	4821	887.00	717.00
	30'	13'	7400	4874	887.00	717.00
	30'	14'	8000	5213	887.00	717.00
	30'	16'	9100	5905	887.00	717.00
	30'	18'	10200	6504	887.00	717.00
100'	32'	12'	7800	5087	1009.00	813.00
	32'	14'	9000	5842	1009.00	813.00
	32'	15'	9200	6253	1009.00	813.00
	32'	16'	10300	6558	1009.00	813.00

CIR.	DIA.	HGT.	BU. CAP.	AVG. BIN COST	CONC. FLOOR	STEEL FLOOR
107'	34'	14'	10200	6504	1139.00	909.00
110'	35'	12'	9300	6032	1207.00	956.00
	36'	12'	9800	6301	1278.00	1016.00
	36'	14'	11500	7203	1278.00	1016.00
	36'	16'	13100	8043	1278.00	1016.00
	36'	18'	14700	8871	1278.00	1016.00
	36'	32'	26,000	13,858	1282.00	1016.00
123'	39'	9'	8600	5591	1499.00	1160.00
126'	40'	14'	14100	8560	1577.00	1207.00
129'	41'	16'	17000	10318	1657.00	1255.00
157'	50'	7'	11000	6934	2464.00	1303.00
	50'	14'	22000	11968	2464.00	1303.00

ADJUSTMENTS

LADDERS .....$ 33.50 PLUS $4.50 PER LINEAL FOOT
ADD FOR SAFETY CAGES.....$ 9.56 to $ 11.96 PER FOOT INSTALLED

For Boiler Plate Bins use page 62/3 of 1982 Marshall Valuation Service.

Further refinements to this grade of construction can be accomplished by using a quality grade factor of plus or minus 5% to 15%.

ROUND CORRUGATED STEEL BINS

GUIDE FOR ASSIGNING CONSTRUCTION QUALITY

GOOD-Plus 10%	AVERAGE	LOW-MINUS 10%
American	Armco	Buttrey
Behlen	BSB	Cenex
Butler	Circle	Chief
Chicago	Doerr	Co-op
Columbian	G.S.I.	Grain King
Eaton	Gateway	Farmers Grain Exchange
Monarch	M.F.S.	Federal
York	P.V.	Haas
	Reed	Husky
	Superior	Lindsay
	Westeel-Rosco	Red Top
		Sioux
		Ward
		Homemade Bins (Wood or Metal)

MEASURES

SQUARE

144 sq. in.	=	1 sq. ft.
9 sq. ft.	=	1 sq. yard
4840 sq. yd.	=	1 acre
43,560 sq. ft.	=	1 acre
640 acres	=	1 sq. mi. or 1 section
36 sq. mi.	=	1 township

CUBIC

1728 cu. in.	=	1 cu. ft.
27 cu. ft.	=	1 cu. yard
128 cu. ft.	=	1 cord
231 cu. in.	=	1 gallon
1 cu. ft.	=	.8036 bu.

LINEAR

5½ yds	=	1 rod
16½ ft.	=	1 rod
320 rods	=	1 mile
5280 ft.	=	1 mile
1760 yds.	=	1 mile

To compute the circumference of a circle - Multiply the diameter by 3.1416

To compute the area of a circle - Multiply the square of the diameter by 0.7854, or multiply the square of the radius by 3.1416.

To compute the cubical contents of a circular column or cylinder - Multiply the area of the circle by the height.

Alfalfa Seed	1 Bushel	60 Pounds
Barley	1 Bushel	48 Pounds
Beans	1 Bushel	60 Pounds
Flax Seed	1 Bushel	56 Pounds
Oats	1 Bushel	32 Pounds
Potatoes	1 Bushel	60 Pounds
Rye	1 Bushel	56 Pounds
Wheat	1 Bushel	60 Pounds

SQUARE FOOT PERIMETER MULTIPLIERS

SQUARE FOOTAGE	PERIMETERS 50	75	100	125	150	200	250	300	350	400	450	500	550	600
100	1.217	1.386	1.579	1.827	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
200	1.170	1.324	1.497	1.714	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
300	1.127	1.265	1.419	1.608	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
400	1.085	1.208	1.345	1.508	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
500	1.044	1.154	1.275	1.415	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
600	1.004	1.102	1.209	1.328	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
700	.965	1.050	1.143	1.241	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
800	.927	1.001	1.103	1.190	1.250	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
900	.891	.954	1.063	1.139	1.202	1.289	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,000	- - -	- - -	1.023	1.088	1.154	1.275	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,100	- - -	- - -	1.006	1.066	1.128	1.242	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,200	- - -	- - -	.989	1.044	1.102	1.209	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,300	- - -	- - -	.972	1.022	1.076	1.176	1.285	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,400	- - -	- - -	.955	1.000	1.050	1.143	1.245	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,500	- - -	- - -	.936	.980	1.023	1.110	1.197	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,600	- - -	- - -	.917	.969	1.010	1.093	1.175	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,700	- - -	- - -	.899	.958	.997	1.076	1.153	- - -	- - -	- - -	- - -	- - -	- - -	- - -
1,800	- - -	- - -	- - -	.947	.984	1.059	1.131	1.328	- - -	- - -	- - -	- - -	- - -	- - -
1,900	- - -	- - -	- - -	.936	.971	1.042	1.109	1.238	- - -	- - -	- - -	- - -	- - -	- - -
2,000	- - -	- - -	- - -	.926	.957	1.023	1.088	1.154	- - -	- - -	- - -	- - -	- - -	- - -
2,500	- - -	- - -	- - -	.892	.919	.971	1.023	1.075	1.127	- - -	- - -	- - -	- - -	- - -
3,000	- - -	- - -	- - -	- - -	.893	.936	.98	1.023	1.066	1.110	- - -	- - -	- - -	- - -
3,500	- - -	- - -	- - -	- - -	.874	.912	.947	.985	1.023	1.058	1.096	1.133	1.172	1.212
4,000	- - -	- - -	- - -	- - -	- - -	.893	.926	.957	.989	1.023	1.055	1.088	1.121	1.154
5,000	- - -	- - -	- - -	- - -	- - -	.866	.893	.919	.940	.971	.997	1.023	1.049	1.075
6,000	- - -	- - -	- - -	- - -	- - -	- - -	.872	.893	.915	.936	.958	.980	1.002	1.023
7,000	- - -	- - -	- - -	- - -	- - -	- - -	.856	.874	.893	.912	.930	.948	.967	.986
8,000	- - -	- - -	- - -	- - -	- - -	- - -	- - -	.859	.876	.892	.909	.926	.942	.957
9,000	- - -	- - -	- - -	- - -	- - -	- - -	- - -	.849	.863	.878	.893	.907	.922	.936
10,000	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	.854	.866	.879	.892	.906	.919

HEIGHT MULTIPLIERS

Effective length on high pitched roofs = Height to eaves plus one-half the height from the eaves to the ridge.

AVE. WALL HGT.	HGT. MULT.	AVE. WALL HGT.	HGT. MULT.
8	.96	15	1.08
9	.98	16	1.10
10	1.000	17	1.135
11	1.025	18	1.15
12	1.04	19	1.170
13	1.06	20	1.20
			1.38

Height and Perimeter Multipliers are not to b used with the following improvements.

1) Quonset
2) Pre-engineered Steel
3) Hay Sheds
4) Low Cost Farm Storage Sheds
5) Old Farm Sheds

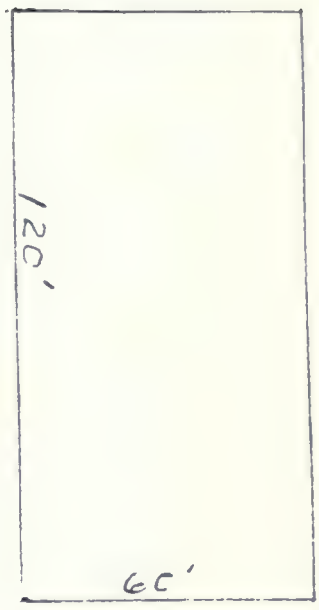
Rev. 03/84

BOAT DOCKS

LOT VALUE COMPUTATIONS

RULE 1
RECTANGULAR LOTS

This is the most common shaped lot. The only variation being in the depth.
EXAMPLE: A lot 60' wide and 120' deep in a subdivision where the standard lot depth is 140'. The front foot value for a 140' deep lot has been established by comparison to be $50 per front foot.



The unit % is determined by using the 140' standard depth table. Read across from the 120 foot "depth in feet" column, the percentage is 93%. This lot is computed and listed as follows:

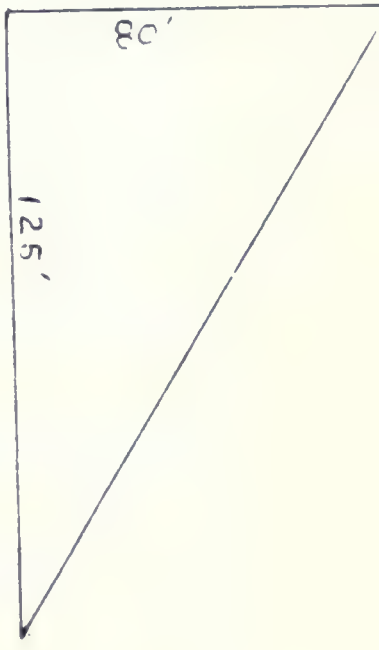
$50 x 93% = $46.50 per F.F. x 60' = $2,790

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60'	120'	$50	93%	$46.50	$2,790

RULE 2
TRIANGULAR LOT - BASE ON STREET

Triangle lots that base on the street are computed at 66% of the street frontage for the lot width. The depth is measured perpendicular from the base to the apex.
EXAMPLE: A triangle lot having a frontage of 80' and depth of 125' in an area where the standard depth is 150' and the front foot value is $60.

STREET

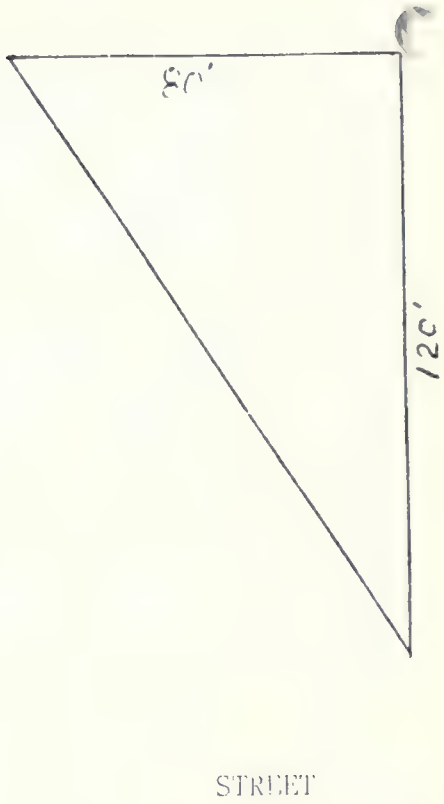


The unit % is determined by using the 150' standard depth table. Read across from the 124 foot "depth in feet" column, the percentage is 91%. This is computed and listed as follows:

80' x 66% = 52.8'
$60 x 91% = $54.60 x 52.8' = $2,882.88 - rounded to nearest $5 is $2,885.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
52.8'	125'	$60	91%	$54.60	$2,885

RULE 3
TRIANGULAR LOT - APEX ON THE STREET



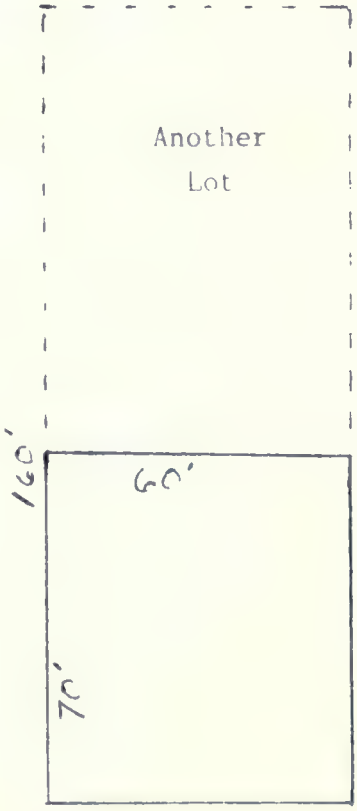
Triangle lots having the apex on the street are computed at 34% of the base or rear width.
EXAMPLE: A triangle lot with the apex on the street having a base of 80' and 120' depth, on a street where the standard depth is 150' and the front foot value has been established by comparison at $60 per front foot.

The unit % is determined by using the 150' standard depth table. Read across from the 120 foot "depth in feet" column, the percentage is 89%. The lot is computed and listed as follows:

80' x 34% = 27.2'
$60 x 89% = $53.40 x 27.2' = $1452 - rounded to nearest $5 is $1450.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
27.2'	120'	$60	89%	$53.40	$1,450

RULE 4
BACK LOT



Lots that do not have a street frontage are termed back lots.
EXAMPLE: A lot 60' wide and 160' deep in a standard depth area of 140'. The rear 70' depth has been deeded in separate ownership. The front foot value has been established by comparison to be $45 per foot.

Using the 140' standard depth table determine the percentage for the total 160' depth. This percentage is 107%. Subtract the depth percentage for the 70' depth, which is 71%. The remainder is the percentage to be applied to the front foot value. Compute and list this lot as follows:

107% - 71% = 36%
$45 x 36% = $16.20 x 60' = $972 rounded to the nearest $5 is $970. "R" denotes rear lot.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60' R	70'	$45	36%	$16.20	$970

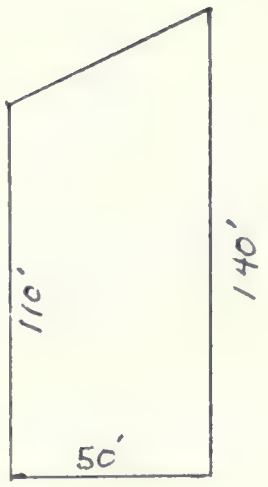
LOTS WITH PARALLEL SIDES OF UNEQUAL LENGTH

This lot has side lines at right angles to the street but with unequal depth.
EXAMPLE: A lot with a 50' front and unequal sides of 140' and 110', in an area where the standard depth is 140' and the front foot price is $60 per foot.

This lot is computed and listed as follows:

110' + 140' = 250' ÷ 2 = 125' average depth - apply RULE 1.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	125'	$60	94%	$56.40	$2,820



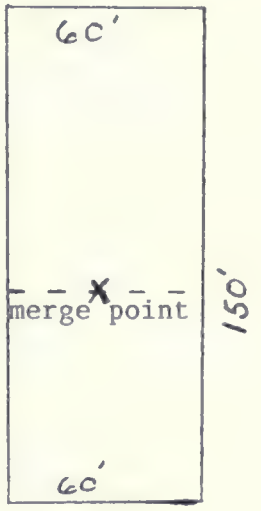
STREET

MERGED LOTS

Lots that extend from one street to another and have a higher value on one street than the other must be merged in a ratio influence to value. To find the merge point add the two values together and divide into the total depth.
EXAMPLE: A lot 150' deep, 60' wide, fronting on two streets of different values. By comparison one street is valued at $40 per front foot and the other is $30 per front foot. Standard lot depth is this area is 140'.

$40 + $30 = $70
150' ÷ $70 = 2.14
$40 x 2.14 = 86' - apply RULE 1.
$30 x 2.14 = 64' - apply RULE 1.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
60'	86'	$40	78%	$31.20	$1870
60'	64'	30	68%	20.40	1225

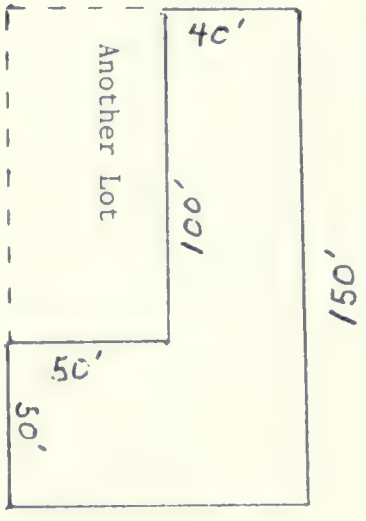


STREET

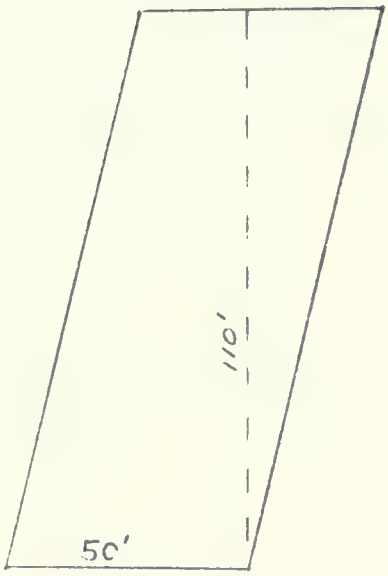
L SHAPED AND BACK LOT

An "L" shaped lot having a portion as a back lot is computed and listed as follows:
EXAMPLE: A lot is located in an area with a 140' standard depth and a $60 front foot value. The lot has a 150' depth, a street frontage of 40' and a 50' "L" protruding behind another lot in the area.
Use two lines - apply RULES 1 and 4.

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
40'	150'	$60	104%	$62.40	$2495
50' R	50'	60	19%	11.40	570



PARALLELOGRAM LOTS



Measure this type of lot at a right angle to the street rather than following the lot line. Use this depth measurement for the corrective factor from the depth table.
EXAMPLE: A lot with 50' front and 110' depth in an area where the standard depth lot is 140' and the front foot value has been established by comparison at $40 per front foot. This lot is computed and listed as follows:

Apply RULE 1.

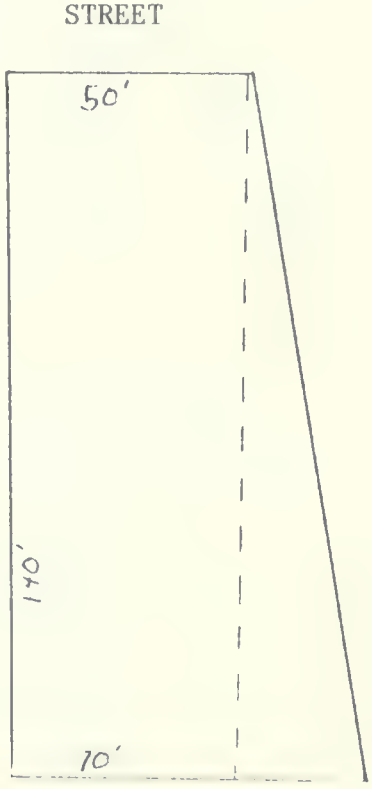
Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	110'	$40	89%	$35.60	$1,780

TRAPEZOIDAL LOT

A lot with parellel front and rear lines of unequal length is computed and listed as follows:
EXAMPLE: A lot 140' deep, 50' front and 70' rear in an area where the front foot value is $40 and the standard depth is 140'.

Use two lines - apply RULES 1 and 3

Frontage Figured	Average Depth	Unit Price	Unit %	Front Ft. Price	Total Value
50'	140'	$40	100%	$40	$2000
70'	140	40	100%	40	280



Same lot but with longest parallel line on the street apply RULES 1 and 2.

LOT DEPTH VALUATION CALCULATIONS

These tables are to be used as guides for calculating values for lots that are either shorter or longer than the standard lot depth in the area.

Standard lot depths are shown across the top of the tables above the solid line. The left-hand column shows various actual depths that may exist.

Select the actual depth and follow across to the proper standard lot depth for the area being appraised. The figure encountered is the percentage factor to be applied to the front foot value of the lot. The modified front foot value is then multiplied by the width of the lot.

LOT DEPTH VALUATION FACTORS

Depth in Feet	100'	110'	115'	120'	125'	130'
10	32	30	29	29	28	28
12	35	33	32	32	31	30
14	37	36	35	34	34	33
16	40	38	37	37	36	35
18	42	40	40	39	38	37
20	45	43	42	41	40	39
22	47	45	44	43	42	41
24	49	47	46	45	44	43
26	51	49	48	47	46	45
28	53	50	49	48	47	46
30	55	52	51	50	49	48
32	57	54	53	52	51	50
34	58	56	54	53	52	51
36	60	57	56	55	54	53
38	62	59	58	56	55	54
40	63	60	59	58	57	55
42	65	62	60	59	58	57
44	66	63	62	61	59	58
46	68	65	63	62	61	59
48	69	66	65	63	62	61
50	71	67	66	65	63	62
52	72	69	67	66	65	63
54	73	70	69	67	66	64
56	75	71	70	68	67	66
58	76	73	71	70	68	67
60	77	74	72	71	69	68
62	79	75	73	72	70	69
64	80	76	75	73	72	70
66	81	77	76	74	73	71
68	82	79	77	75	74	72
70	84	80	78	76	75	73
72	85	81	79	77	76	74
74	86	82	80	79	77	75
76	87	83	81	80	78	76
78	88	84	82	81	79	77
80	89	85	83	82	80	78
82	91	86	84	83	81	79
84	92	87	85	84	82	80
86	93	88	87	85	83	81
88	94	89	88	86	84	82
90	95	90	88	87	85	83
92	96	91	89	88	86	84
94	97	92	90	89	87	85
96	98	93	91	89	88	86
98	99	94	92	90	89	87
100	100	95	93	91	89	88
102	101	96	94	92	90	89
104	102	97	95	93	91	89
106	103	98	96	94	92	90
108	104	99	97	95	93	91

LOT DEPTH VALUATION FACTORS

Depth in Feet	135'	140'	145'	150'	155'	160'
10	32	30	29	29	28	28
12	35	33	32	32	31	30
14	37	36	35	34	34	33
16	40	38	37	37	36	35
18	42	40	40	39	38	37
20	45	43	42	41	40	39
22	47	45	44	43	42	41
24	49	47	46	45	44	43
26	51	49	48	47	46	45
28	53	50	49	48	47	46
30	55	52	51	50	49	48
32	57	54	53	52	51	50
34	58	56	54	53	52	51
36	60	57	56	55	54	53
38	62	59	58	56	55	54
40	63	60	59	58	57	55
42	65	62	60	59	58	57
44	66	63	62	61	59	58
46	68	65	63	62	61	59
48	60	59	58	57	56	55
50	61	60	59	58	56	56
52	62	61	60	59	58	57
54	63	62	61	60	59	58
56	64	63	62	61	60	59
58	66	64	63	62	61	60
60	67	65	64	63	62	61
62	68	67	65	64	63	62
64	69	68	66	65	64	63
66	70	69	67	66	65	64
68	71	70	68	67	66	65
70	72	71	69	68	67	66
72	73	72	70	69	68	67
74	74	73	71	70	69	68
76	75	74	72	71	70	69
78	76	75	73	72	71	70
80	77	76	74	73	72	71
82	78	77	75	74	73	72
84	79	77	76	75	74	72
86	80	78	77	76	74	73
88	81	79	78	77	75	74
90	82	80	79	77	76	75
92	83	81	80	78	77	76
94	83	82	81	79	78	77
96	84	83	81	80	79	77
98	85	84	82	81	80	78
100	86	85	83	82	80	79
102	87	85	84	82	81	80
104	88	86	85	83	82	81
106	89	87	86	84	83	81
108	89	88	86	85	83	82

LOT DEPTH VALUATION FACTORS

Depth in Feet	100'	110'	115'	120'	125'	130'
110	105	100	98	96	94	92
112	106	101	99	97	95	93
114	107	102	100	98	96	94
116	108	103	100	98	96	94
118	109	104	101	99	97	95
120	110	104	102	100	98	96
122	111	105	103	101	99	97
124	111	106	104	102	100	98
126	112	107	105	102	100	98
128	113	108	106	103	101	99
130	114	109	106	104	102	100
132	115	110	107	105	103	101
134	116	110	108	106	104	102
136	117	111	109	107	104	102
138	118	112	110	107	105	103
140	118	113	110	108	106	104
142	119	114	111	109	107	105
144	120	114	112	110	107	105
146	121	115	113	110	108	106
148	122	116	114	111	109	107
150	123	117	114	112	110	107
152	123	118	115	113	110	108
154	124	118	116	113	111	109
156	125	119	117	114	112	110
158	126	120	117	115	112	110
160	127	121	118	116	113	111
162	127	121	119	116	114	112
164	128	122	119	117	115	112
166	129	123	120	118	115	113
168	130	124	121	118	116	114
170	130	124	122	119	117	114
172	131	125	122	120	117	115
174	132	126	123	120	118	116
176	133	127	124	121	119	116
178	133	127	124	122	119	117
180	134	128	125	123	120	118
182	135	129	126	123	121	118
184	136	129	126	124	121	119
186	136	130	127	125	122	120
188	137	131	128	125	123	120
190	138	131	129	126	123	121
192	139	132	129	127	124	122
194	139	133	130	127	125	122
196	140	133	131	128	125	123
198	141	134	131	128	126	123
200	141	135	132	129	126	124

1972 COST COMPUTATION MANUAL

DEPARTMENT OF REVENUE
PROPERTY ASSESSMENT DIVISION
RESIDENTIAL-COMMERCIAL BUREAU

FIRST STORY

RATE = [(FSC ÷ (541)) + VSC] x DUF

COST = (541) x RATE x [1± (506)]

UPPER STORY

STORIES = (512) - 1

RATE = [(FSC ÷ (542)) + VSC] x .48 x DUF

COST = (542) x RATE x [1 ± (506)]

HALF STORY

RATE = [(FSC ÷ (544)) + VSC] x .33 x DUF

COST = (544) x RATE x [1 ± (506)]

DWELLING UNITS FACTOR - DUF

if (501) = SFR use 1.00, if (501) = DUF use 1.04, if (501) = TRI use 1.08

GRADE (505)	FIXED STORY COST FSC	VARIABLE STORY COST VSC
1	570.69	5.2774
2	761.07	7.2964
3	1560.83	9.2417
4	2470.52	10.4564
5	2727.64	11.6509
6	2983.02	12.8338
7	3455.27	14.5435
8	3623.52	15.7606

1F - 1 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	8.14	3.91	2.69
300	7.18	3.45	2.37
400	6.71	3.23	2.22
500	6.43	3.08	2.12
600	6.24	2.99	2.06
700	6.09	2.93	2.02
800	5.99	2.88	1.98
900	5.92	2.84	1.96
1000	5.85	2.81	1.94
1100	5.80	2.79	1.92
1200	5.76	2.77	1.91
1300	5.72	2.75	1.90
1400	5.69	2.73	1.89
1500	5.67	2.72	1.88
1600	5.64	2.71	1.87
1700	5.62	2.70	1.86
1800	5.60	2.69	1.86
1900	5.59	2.68	1.84
2000	5.57	2.68	1.84
2100	5.56	2.67	1.83
2200	5.54	2.66	1.83
2300	5.53	2.66	1.82
2400	5.52	2.65	1.82
2500	5.51	2.65	1.82
2600	5.50	2.65	1.81
2700	5.49	2.64	1.81
2800	5.48	2.64	1.81
2900	5.48	2.64	1.81
3000	5.47	2.63	1.81

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 2 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	11.11	5.33	3.66
300	9.83	4.72	3.25
400	9.20	4.42	3.04
500	8.83	4.23	2.91
600	8.57	4.11	2.83
700	8.39	4.03	2.77
800	8.25	3.96	2.73
900	8.15	3.91	2.69
1000	8.07	3.87	2.67
1100	7.99	3.84	2.64
1200	7.93	3.81	2.62
1300	7.88	3.79	2.61
1400	7.84	3.77	2.60
1500	7.81	3.76	2.58
1600	7.78	3.74	2.57
1700	7.75	3.73	2.56
1800	7.72	3.72	2.56
1900	7.70	3.69	2.55
2000	7.68	3.69	2.54
2100	7.66	3.68	2.54
2200	7.65	3.67	2.53
2300	7.63	3.66	2.53
2400	7.62	3.66	2.52
2500	7.61	3.65	2.52
2600	7.60	3.64	2.51
2700	7.59	3.64	2.51
2800	7.58	3.63	2.51
2900	7.57	3.63	2.50
3000	7.56	3.63	2.50

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 3 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	17.05	8.19	5.63
300	14.45	6.94	4.77
400	13.15	6.32	4.35
500	12.37	5.94	4.08
600	11.85	5.69	3.91
700	11.48	5.51	3.79
800	11.20	5.38	3.69
900	10.98	5.27	3.62
1000	10.81	5.19	3.57
1100	10.67	5.12	3.52
1200	10.55	5.07	3.48
1300	10.44	5.02	3.45
1400	10.36	4.98	3.42
1500	10.29	4.95	3.40
1600	10.22	4.90	3.38
1700	10.17	4.88	3.36
1800	10.11	4.85	3.34
1900	10.07	4.83	3.33
2000	10.03	4.81	3.31
2100	9.99	4.80	3.30
2200	9.96	4.78	3.29
2300	9.93	4.76	3.28
2400	9.90	4.75	3.27
2500	9.88	4.74	3.26
2600	9.84	4.73	3.26
2700	9.82	4.72	3.25
2800	9.80	4.71	3.24
2900	9.78	4.70	3.24
3000	9.76	4.69	3.23

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 4 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	22.81	10.95	7.53
300	18.70	8.98	6.18
400	16.63	7.98	5.49
500	15.40	7.39	5.09
600	14.58	7.00	4.81
700	13.99	6.71	4.62
800	13.54	6.51	4.48
900	13.21	6.34	4.37
1000	12.93	6.21	4.27
1100	12.71	6.10	4.19
1200	12.52	6.01	4.13
1300	12.37	5.94	4.08
1400	12.22	5.87	4.04
1500	12.11	5.82	4.00
1600	12.01	5.77	3.97
1700	11.92	5.72	3.94
1800	11.84	5.69	3.91
1900	11.77	5.65	3.89
2000	11.69	5.62	3.87
2100	11.63	5.59	3.85
2200	11.58	5.57	3.83
2300	11.53	5.53	3.81
2400	11.49	5.51	3.80
2500	11.45	5.49	3.79
2600	11.41	5.48	3.77
2700	11.38	5.46	3.76
2800	11.34	5.44	3.75
2900	11.31	5.43	3.74
3000	11.29	5.42	3.73

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 5 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	25.30	12.14	8.35
300	20.75	9.97	6.85
400	18.47	8.87	6.10
500	17.11	8.22	5.65
600	16.20	7.78	5.35
700	15.56	7.47	5.14
800	15.07	7.23	4.98
900	14.68	7.05	4.85
1000	14.39	6.91	4.75
1100	14.13	6.78	4.67
1200	13.93	6.69	4.60
1300	13.76	6.60	4.54
1400	13.61	6.53	4.49
1500	13.47	6.47	4.45
1600	13.36	6.42	4.42
1700	13.26	6.37	4.38
1800	13.17	6.33	4.35
1900	13.09	6.29	4.33
2000	13.02	6.26	4.30
2100	12.96	6.23	4.27
2200	12.89	6.20	4.25
2300	12.84	6.16	4.24
2400	12.79	6.14	4.22
2500	12.75	6.12	4.21
2600	12.70	6.10	4.19
2700	12.67	6.08	4.18
2800	12.63	6.06	4.17
2900	12.60	6.05	4.16
3000	12.57	6.03	4.15

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 6 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	27.76	13.32	9.16
300	22.78	10.94	7.52
400	20.29	9.74	6.70
500	18.80	9.03	6.21
600	17.81	8.55	5.88
700	17.10	8.21	5.65
800	16.56	7.95	5.47
900	16.16	7.76	5.33
1000	15.82	7.60	5.22
1100	15.55	7.47	5.14
1200	15.32	7.35	5.06
1300	15.13	7.26	5.00
1400	14.97	7.19	4.95
1500	14.83	7.12	4.89
1600	14.70	7.06	4.85
1700	14.59	7.01	4.82
1800	14.50	6.96	4.78
1900	14.41	6.92	4.76
2000	14.33	6.88	4.73
2100	14.26	6.85	4.71
2200	14.20	6.82	4.69
2300	14.13	6.78	4.67
2400	14.08	6.76	4.65
2500	14.03	6.73	4.63
2600	13.98	6.71	4.62
2700	13.94	6.69	4.61
2800	13.90	6.67	4.59
2900	13.87	6.66	4.58
3000	13.83	6.64	4.57

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 7 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	31.82	15.28	10.51
300	26.07	12.52	8.60
400	23.19	11.14	7.66
500	21.46	10.30	7.08
600	20.30	9.75	6.70
700	19.48	9.36	6.43
800	18.87	9.06	6.23
900	18.38	8.83	6.07
1000	18.01	8.65	5.94
1100	17.69	8.49	5.84
1200	17.43	8.37	5.76
1300	17.20	8.26	5.68
1400	17.02	8.17	5.62
1500	16.85	8.10	5.57
1600	16.71	8.03	5.51
1700	16.58	7.96	5.47
1800	16.47	7.90	5.43
1900	16.37	7.86	5.40
2000	16.28	7.81	5.37
2100	16.20	7.77	5.35
2200	16.12	7.74	5.32
2300	16.06	7.71	5.30
2400	15.98	7.68	5.28
2500	15.93	7.65	5.26
2600	15.87	7.63	5.24
2700	15.83	7.60	5.23
2800	15.78	7.58	5.21
2900	15.74	7.56	5.20
3000	15.70	7.54	5.19

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

1F - 8 SINGLE FAMILY RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
200	33.88	16.27	11.19
300	27.85	13.37	9.19
400	24.83	11.92	8.20
500	23.01	11.04	7.60
600	21.81	10.46	7.20
700	20.94	10.06	6.92
800	20.29	9.74	6.70
900	19.80	9.50	6.53
1000	19.36	9.31	6.40
1100	19.06	9.15	6.30
1200	18.79	9.02	6.21
1300	18.56	8.91	6.12
1400	18.35	8.81	6.06
1500	18.18	8.73	6.00
1600	18.03	8.66	5.95
1700	17.90	8.59	5.91
1800	17.78	8.53	5.87
1900	17.67	8.48	5.84
2000	17.58	8.44	5.80
2100	17.49	8.40	5.78
2200	17.42	8.36	5.75
2300	17.34	8.33	5.73
2400	17.28	8.30	5.71
2500	17.21	8.27	5.69
2600	17.16	8.24	5.67
2700	17.11	8.22	5.65
2800	17.06	8.19	5.64
2900	17.01	8.17	5.62
3000	16.97	8.15	5.61

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

2F - 4 DUPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	17.29	8.30
500	16.00	7.68
600	15.15	7.27
700	14.54	6.98
800	14.08	6.76
900	13.72	6.59
1000	13.43	6.45
1100	13.20	6.34
1200	13.01	6.25
1300	12.84	6.16
1400	12.70	6.10
1500	12.58	6.04
1600	12.48	5.99
1700	12.38	5.94
1800	12.29	5.90
1900	12.22	5.87
2000	12.15	5.84
2100	12.09	5.81
2200	12.04	5.78
2300	11.99	5.76
2400	11.94	5.74
2500	11.90	5.72
2600	11.86	5.70
2700	11.82	5.68
2800	11.79	5.66
2900	11.76	5.65
3000	11.73	5.63

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

2F - 5 DUPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	19.20	9.21
500	17.78	8.53
600	16.84	8.09
700	16.16	7.76
800	15.67	7.52
900	15.26	7.32
1000	14.95	7.17
1100	14.68	7.05
1200	14.47	6.95
1300	14.29	6.87
1400	14.13	6.78
1500	14.00	6.72
1600	13.88	6.66
1700	13.78	6.61
1800	13.69	6.57
1900	13.61	6.53
2000	13.52	6.50
2100	13.46	6.46
2200	13.40	6.43
2300	13.34	6.41
2400	13.29	6.38
2500	13.24	6.36
2600	13.20	6.34
2700	13.16	6.32
2800	13.13	6.30
2900	13.09	6.29
3000	13.06	6.27

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

2F - 6 DUPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	21.09	10.13
500	19.54	9.38
600	18.51	8.89
700	17.76	8.53
800	17.21	8.27
900	16.79	8.06
1000	16.44	7.89
1100	16.16	7.76
1200	15.92	7.65
1300	15.72	7.55
1400	15.56	7.47
1500	15.40	7.39
1600	15.27	7.33
1700	15.16	7.28
1800	15.06	7.23
1900	14.97	7.19
2000	14.89	7.15
2100	14.82	7.11
2200	14.74	7.08
2300	14.68	7.05
2400	14.63	7.03
2500	14.58	7.00
2600	14.53	6.98
2700	14.49	6.96
2800	14.45	6.94
2900	14.41	6.92
3000	14.38	6.90

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

3F - 4 TRIPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	17.94	8.61
500	16.60	7.97
600	15.72	7.55
700	15.08	7.24
800	14.61	7.02
900	14.24	6.84
1000	13.94	6.69
1100	13.70	6.58
1200	13.49	6.48
1300	13.33	6.40
1400	13.18	6.33
1500	13.06	6.27
1600	12.94	6.22
1700	12.84	6.16
1800	12.76	6.12
1900	12.68	6.09
2000	12.61	6.05
2100	12.55	6.02
2200	12.49	6.00
2300	12.44	5.97
2400	12.39	5.95
2500	12.35	5.93
2600	12.30	5.91
2700	12.26	5.89
2800	12.23	5.87
2900	12.19	5.86
3000	12.16	5.84

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

3F - 5 TRIPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	19.92	9.56
500	18.44	8.86
600	17.47	8.39
700	16.77	8.06
800	16.24	7.80
900	15.83	7.60
1000	15.51	7.45
1100	15.24	7.31
1200	15.02	7.21
1300	14.83	7.12
1400	14.66	7.04
1500	14.53	6.98
1600	14.41	6.92
1700	14.30	6.87
1800	14.20	6.82
1900	14.11	6.77
2000	14.03	6.74
2100	13.96	6.70
2200	13.90	6.67
2300	13.85	6.65
2400	13.79	6.62
2500	13.74	6.60
2600	13.70	6.58
2700	13.66	6.56
2800	13.62	6.54
2900	13.58	6.52
3000	13.54	6.50

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

3F - 6 TRIPLEX RESIDENTIAL BUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY
400	21.88	10.51
500	20.27	9.73
600	19.21	9.21
700	18.43	8.85
800	17.86	8.57
900	17.42	8.36
1000	17.06	8.19
1100	16.77	8.05
1200	16.52	7.93
1300	16.32	7.83
1400	16.14	7.75
1500	15.98	7.68
1600	15.85	7.61
1700	15.73	7.56
1800	15.63	7.51
1900	15.54	7.46
2000	15.45	7.42
2100	15.37	7.38
2200	15.30	7.34
2300	15.24	7.31
2400	15.18	7.29
2500	15.13	7.26
2600	15.08	7.24
2700	15.03	7.22
2800	14.99	7.20
2900	14.95	7.18
3000	14.92	7.16

MULTIPLY BY RESIDENCE GRADE VARIATION (506)

EXTERIOR BRICK/STONE AREA

SQ FT = $[(4 \times \sqrt{(541)} \times 9) + (4 \times \sqrt{(542)} \times 8) + (4 \times \sqrt{(544)} \times 6)] \times (518)$

RATE = 1.50

COST = SQ FT x RATE

ATTIC FINISH (per sq. ft. finished floor area):

COST = 2.50 x GRADE FACTOR

GRADE(505):	1	2	3	4	5	6	7	8
FACTOR	0.60	0.60	0.75	0.90	1.00	1.10	1.25	1.70

UNFINISHED STORIES - DEDUCT (per sq. ft. unfinished floor area)

SQ. FT. AREA	FULL STORY	HALF STORY
100	5.97	4.00
200	4.16	2.79
300	3.56	2.39
400	3.26	2.19
500	3.08	2.07
600	2.96	1.99
700	2.87	1.93
800	2.81	1.89
900	2.76	1.86
1000	2.72	1.82
1100	2.69	1.80
1200	2.66	1.78
1300	2.64	1.76
1400	2.62	1.75
1500	2.60	1.74
1600	2.59	1.73
1700	2.58	1.72
1800	2.56	1.71
1900	2.55	1.71
2000	2.54	1.70
2100	2.54	1.70
2200	2.53	1.69
2300	2.52	1.69
2400	2.51	1.68
2500	2.51	1.68
2600	2.50	1.67
2700	2.50	1.67
2800	2.49	1.67
2900	2.49	1.66
3000	2.48	1.66

TABLE VALUES MUST BE MULTIPLIED BY GRADE FACTOR AND GRADE VARIATION (506) FOR STRUCTURE GRADE (505)

GRADE(505):	1	2	3	4	5	6	7	8
FACTOR	0.40	0.55	0.75	0.90	1.00	1.10	1.25	1.35

FULL STORY UNFINISHED - DEDUCT

RATE = (361.03 ÷ (543) + 2.3543)

COST = (543) x RATE x GRADE FACTOR x [1 ± (506)]

HALF STORY UNFINISHED - DEDUCT

RATE = (361.03 ÷ (545) + 2.3543) x .67

COST = (545) x RATE x GRADE FACTOR x [1 ± (506)]

BASEMENT CONSTRUCTION (per sq. ft. floor area)

SQ. FT. AREA	UNFINISHED SQ. FT. COST	FINISHED SQ. FT. COST
200	4.53	3.86
300	4.28	3.29
400	4.01	2.99
500	3.78	2.82
600	3.56	2.71
700	3.39	2.63
800	3.24	2.57
900	3.11	2.52
1000	2.99	2.48
1100	2.88	2.44
1200	2.79	2.42
1300	2.71	2.40
1400	2.63	2.38
1500	2.56	2.36
1600	2.50	2.35
1700	2.43	2.33
1800	2.37	2.32
1900	2.32	2.31
2000	2.28	2.30
2100	2.23	2.30
2200	2.19	2.29
2300	2.15	2.28
2400	2.11	2.28
2500	2.08	2.27
2600	2.04	2.27
2700	2.01	2.26
2800	1.96	2.26
2900	1.95	2.25
3000	1.92	2.25

The unfinished basement cost must first be applied to the basement areas. Then any finished basement area cost may be included.

TABLE VALUES MUST BE MULTIPLIED BY GRADE FACTOR AND GRADE VARIATION (506) FOR STRUCTURE GRADE (505)

- - - -

BASEMENT FINISHED

RATE = (345.72 ÷ (521) + 2.1288)

COST = (521) x RATE x GRADE FACTOR x [1 ± (522)]

HEATING (per sq. ft. heated floor area)

	SQ FT AREA				
SYSTEM (525)	400	800	1200	1600	2000
FLOOR OR WALL FURNACE	0.76	0.45	0.35	0.31	0.28
HOT WATER/RADIANT/HEAT PUMP	1.30	1.25	1.19	1.15	1.10
STEAM OR FORCED HOT AIR	0.90	0.85	0.80	0.75	0.69
GRAVITY HOT AIR	0.86	0.55	0.45	0.40	0.37
ELECTRIC BASEBOARD	0.80	0.75	0.69	0.64	0.59
PACKAGE A.C.	1.48	1.43	1.38	1.33	1.28
HOT AND COOL AIR	1.79	1.74	1.69	1.64	1.59

Table values must be multiplied by GRADE FACTOR and GRADE VARIATION (506) for structure grade (505).

- -

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.75	0.75	0.75	0.90	1.00	1.10	1.25	1.35

- -

RATE [(FHC ÷ (549) + VHC1) - (VHC2 x (549))]

COST = (549) x RATE x GRADE FACTOR x [1 ± (506)]

SYSTEM (525)	FIXED HEAT COST FHC	VARIABLE HEAT COST 1 VHC1	VARIABLE HEAT COST 2 VHC2
F/W	240	.15	0
HW	0	1.35	.000125
STM	0	.95	.000125
GHA	240	.25	0
FHA	0	.95	.000125
RAD/HP	0	1.35	.000125
EBB	0	.85	.000125
PAC	0	1.53	.000125
HCA	0	1.84	.000125

COOLING (per sq. ft. heated floor area)

SQ FT AREA	400	800	1200	1600	2000
SQ FT COST	$1.40	$1.35	$1.30	$1.26	$1.20

Table values must be multiplied by GRADE FACTOR and GRADE VARIATION (506) for structure grade (505).

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.65	0.65	0.65	0.80	1.00	1.25	1.35	1.50

RATE = [1.45 - (.000125 x (549))]

COST = (549) x RATE x GRADE FACTOR x [1 ± (506)]

PLUMBING - Add to or deduct from base for grade (per unit or fixture)

TYPE	COST
FULL BATH	$ 610
HALF BATH	364
WATER HEATER	138
KITCHEN SINK	172
OTHER SINGLE FIXTURE (AVERAGE COST)	187

Cost must be multiplied by GRADE FACTOR and GRADE VARIATION (506) for structure grade (506)

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.75	0.75	0.75	0.90	1.00	1.10	1.25	1.35

COST = TYPE x GRADE FACTOR x [1 ± (506)]

FIREPLACES (per unit)

TYPE	COST
1 STORY STACK	$ 1166
1½ STORY STACK	1289
2 STORY STACK	1412
2ND FIREPLACE ON SAME STACK	261
PRE-FABRICATED FIREPLACE	492

Cost must be multiplied by GRADE FACTOR and GRADE VARIATION (506) for structure grade (506)

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.75	0.75	0.75	0.90	1.00	1.10	1.25	1.35

COST = TYPE x GRADE FACTOR x [1 ± (506)]

BUILT-IN APPLIANCES (average installed cost per unit)

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.75	0.75	0.75	0.90	1.00	1.10	1.25	1.35

COST = $200 x GRADE FACTOR x [1 ± (506)]

PORCHES & DECKS (per sq. ft. floor area)

TYPE	SQ FT COST
DECK OR PATIO (FLOOR ONLY)	$ 2.95
OPEN PORCH (FLOOR & ROOF)	4.10
ENCLOSED PORCH (FLOOR, ROOF & WALLS)	5.95

Table costs must be multiplied by GRADE FACTOR and GRADE VARIATION (506) for structure grade (505)

GRADE FACTOR TABLE

GRADE (505):	1	2	3	4	5	6	7	8
FACTOR:	0.40	0.55	0.75	0.90	1.00	1.10	1.25	1.35

COST = TYPE x GRADE FACTOR x [1 ± (506)]

GARAGES (per sq ft floor area)

SQ FT AREA	BASEMENT GARAGE	ATTACHED GARAGE	DETACHED GARAGE
200	2.35	5.67	5.99
300	2.17	4.99	5.56
400	2.01	4.39	5.14
500	1.86	3.87	4.73
600	1.71	3.43	4.33
700	1.57	3.07	3.94
800	1.44	2.79	3.55

Table values must be multiplied by GRADE FACTOR and GRADE VARIATION for structure (505) or accessory (607) grade.

GRADE FACTOR TABLE

GRADE (505) or (607):	1	2	3	4	5	6	7	8
FACTOR:	0.40	0.55	0.75	0.90	1.00	1.10	1.25	1.35

BASEMENT GARAGE

RATE = [2.70 - (.0019 x (557)) + (.0000004 x $(557)^2$)]

COST = (557) x RATE x GRADE FACTOR x [1 ± (506)]

ATTACHED GARAGE

RATE = [7.25 - (.0088 x (558)) + (.000004 x $(558)^2$)]

COST = (558) x RATE x GRADE FACTOR x [1 ± (506)]

DETACHED GARAGE

RATE = [6.85 - (.0045 x (604)) + (.0000004 x $(604)^2$)]

COST = (604) x RATE x GRADE FACTOR

CARPORTS (per sq. ft. floor area)

COST = $ 1.90 x GRADE FACTOR x [1 ± (506)]

GRADE FACTOR TABLE

GRADE (505) or (607):	1	2	3	4	5	6	7	8
FACTOR:	0.55	0.55	0.75	0.90	1.00	1.10	1.25	1.35

OUTBUILDINGS (per sq. ft. floor area)

SQ. FT. AREA	FIRST STORY	UPPER STORY	HALF STORY
80	4.90	2.35	1.61
100	4.52	2.16	1.49
120	4.27	2.05	1.41
140	4.09	1.96	1.35
160	3.95	1.90	1.31
180	3.85	1.85	1.27
200	3.77	1.81	1.25

Table values must be multiplied by GRADE FACTOR for outbuilding grade (607)

GRADE FACTOR TABLE

GRADE (607):	1	2	3	4	5	6	7	8
FACTOR:	0.55	0.55	0.75	0.75	1.00	1.20	1.20	1.35

OUTBUILDING - FIRST STORY

RATE = (150 ÷ (604) + 3.00)

COST = (604) x RATE x GRADE FACTOR

OUTBUILDING - UPPER STORY

STORIES = (602) - 1 AREA = STORIES x (604)

RATE = (150 ÷ AREA + 3.00) x .48

COST = AREA x RATE x GRADE FACTOR

OUTBUILDINGS - HALF STORY

RATE = (150 ÷ (604) + 3.00) x .33

COST = (604) x RATE x GRADE FACTOR

OUTBUILDING FINISH (per sq. ft. finished floor area)

SQ FT AREA	FULL STORY	HALF STORY
80	5.73	3.84
100	4.98	3.34
120	4.48	3.00
140	4.11	2.76
160	3.85	2.58
180	3.63	2.44
200	3.47	2.33

Table values must be multiplied by GRADE FACTOR for outbuilding grade (607)

GRADE (607):	1	2	3	4	5	6	7	8
FACTOR:	0.55	0.55	0.85	1.00	1.00	1.00	1.10	1.10

OUTBUILDINGS FINISHED - FULL STORY

RATE = (300.72 ÷ (605) + 1.9525)

COST = (605) x RATE x GRADE FACTOR

SWIMMING POOLS (per sq. ft. surface area)

SQ FT AREA	SQ FT COST
300	$10.70
400	9.03
500	8.03
600	7.36
700	6.89
800	6.52

Table values must be multiplied by GRADE FACTOR for swimming pool grade (612)

GRADE (612):	1	2	3	4	5	6	7	8
FACTOR:	0.55	0.55	0.75	0.75	1.00	1.20	1.20	1.35

RATE = (2000 ÷ (611) + 4.00)

COST = (611) x RATE x GRADE FACTOR

PAVING (per sq. ft. paved area)

TYPE	COST
CONCRETE	$ 0.55
ASPHALT	0.30

FRONT FOOT LAND SEGMENT CALCULATION

FRONT - FIGURED = (302) x TRI-FACTOR

$$\text{DEPTH} = \sqrt{[((303) + (304) \div (306)]} - \sqrt{[(304) \div (306)]}$$

SGMT - VALUE = FRONT - FIGURED x DEPTH x (309)

TRI-FACTOR:

if (305) = 0 - NONE use 1
if (305) = 1 - FRONT use .34
if (305) = 2 - BACK use .66

EFFECTIVE AGE CALCULATIONS

PRINCIPAL BUILDINGS OR DETACHED GARAGES

$$\text{PHYS DEPR} = 1 \div (A) - [1 \div (A + B \times \underset{(608)}{(508)})]$$

GRADE (505) or (607)	A	B
1	.788	.01596577
2	.771	.01202954
3	.771	.01202954
4	.840	.01195242
5	.840	.01195242
6	.840	.01195242
7	.898	.01204298
8	.898	.01204298

OUTBUILDINGS OR POOLS

$$\text{PHYS DEPR} = 1 - 2.718281828^{\underset{(613)}{(-.06931471806 \times (607))}}$$

DEPRECIATION TABLES

AGE	OUTBUILDING POOL PAVING	1F-1	1F-2 1F-3	1F-4 1F-5 1F-6	1F-7 1F-8
1	7	3	2	2	1
2	13	5	4	3	3
3	19	7	6	5	4
4	24	10	8	6	6
5	29	12	9	8	7
6	34	14	11	9	8
7	38	16	13	11	10
8	43	18	14	12	11
9	46	20	16	14	12
10	50	21	18	15	13
11	53	23	19	16	14
12	56	25	20	17	15
13	59	26	22	19	17
14	62	28	23	20	18
15	65	30	25	21	19
16	67	31	26	22	20
17	69	33	27	23	21
18	71	34	28	24	22
19	73	35	30	25	23
20	75	37	31	26	24
21		38	32	27	24
22		39	33	28	25
23		40	34	29	26
24		42	35	30	27
26		44	37	32	29
28		46	39	34	30
30		48	41	36	32
32		50	43	37	33
34		52	45	39	35
36		54	47	40	36
38		55	48	42	38
40		57	50	43	39
42		58	51	45	40
44		60	53	46	41
46		61	54	47	42
48		63	56	48	44
50		64	57	49	45
52		65	58	51	46
54		66	59	52	47
56		67	60	53	48
58		69	62	54	49
60		70	63	55	50
65		72	65	57	52
70		74	68	59	54
75			70	61	56
80			72	63	58

POTATO STORAGE

Class D

	LOW COST	AVERAGE	GOOD
FOUNDATION	Concrete	Concrete	Concrete
WALLS	Below ground - Concrete block Above ground - Wood, Insulation, light partition.	Below ground - 6" concrete Above ground - Wood or metal on studs. Insulated.	Below ground - 8" concrete Above ground - metal sandwich or metal or wood panels on heavy studs, insulated
FLOORS	Earth	Plank on concrete	Elevated plank over concrete.
ROOF	Light Insulation	Good rafters & insulation.	Good Truss & insulation.
PLUMBING	None	None	Adequate
LIGHTING	Minimum	Minimum	Adequate
HEATING	None	None	None
OTHER FEATURES	Air Channels	Air Channels	Air Channels
	BASE $7.00	BASE $12.20	BASE $21.30

ADJUSTMENTS

HEIGHT: Multipliers. See page 33.

FLOOR AREA Perimeter Multipliers. See page 33.

For further adjustments, see Unit In Place Cost Schedule pages 3 through 7.

Further refinements to these grades can be accomplished by using a quality grade factor of plus or minus 5% to 15%.